The RUBBER AGE

225 Fourth Avenue, New York

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NEW YORK RUBBER TRADE VOTES TO OPEN EXCHANGE IN FINANCIAL ZONE

Meeting Called by F. R. Henderson is Attended by About 100 —Committee Consisting of Messrs. Henderson, Wilson and Bruyn to Submit Recommendations Shortly

That the formation of a rubber exchange in New York is inevitable and that the rubber trade should act before outside interests do it, was the consensus of opinion of about 100 members of the New York trade who attended a meeting called by F. R. Henderson to discuss the formation of such an exchange. The meeting was held on Sept. 25 at the Reform Club, Mill Lane, New York.

Mr. Henderson, in opening the meeting said that the recent high price of crude rubber was responsible for his idea of an exchange. "It seems reasonable to expect," he continued, "that high prices will continue for some time until new plantings can come into production." He said that there had been some criticism of the proposed exchange. Some thought that it might encourage gambling and more speculation than there has been. "But," denied Mr. Henderson," if it does encourage speculation, it will be speculation on a safe basis. The Exchange would stand as a guarantor of contracts. The fact remains that an exchange is inevitable.

Purpose of Meeting

"My only purpose in calling this meeting was to consider the wishes of the trade and give it the benefit of what I have been doing in getting it started by obtaining a charter. It is a question whether it would be advisable for the rubber exchange to join another already established as a division. London and Singapore are both anxious for an exchange. There is also a group of financiers in Paris who would like to see a rubber exchange established here. My purpose in starting it was to preclude someone out of the industry doing it.

"The by-laws are in the form as required by regulation and are subject to change as the wishes of the trade may indicate, and there probably will be many changes made in them.

"While investigating the workings of an exchange," continued Mr. Henderson, "I ran across a firm outside the rubber trade that had inquiries for rubber from various parts of the country, such as the

(Continued on Next Page)

CONTENTS

NEWS SECTION

Vote to Open Rubber Exchange..3
Hawkeye Reorganized 4
The Chemical Show 5
Bedford Starts Production 6
August Exports Set Record 7
General Officers Optimistic 8
Gates Starts Addition 9
Hits Hoover and Firestone 10
Grasselli Gets Hexa Rights 11
Wenstone Factory Sold 12
Parkland Tire Organized 14
Pittsburgh at Capacity 17
Close Kelly Akron Plant 16
Dayton to Increase Output 17

FEATURES

Power Windups 20
Dubosc Series 24

MARKETS

Cottons and Fabrics 28
Crude Rubber 30
Chemicals 32

BIG TIRE COMPANIES CURTAIL PRODUCTION

The Goodyear Tire & Rubber Co., Akron, recently curtailed its daily production from 36,000 to 30,000 tires a day. According to reports, it is the intention of the Goodyear company to further restrict its production by 2,000 tires a day. The B. F. Goodrich Co., Akron, is now manufacturing 22,000 tires a day, compared with 26,000 during August. Greater activity is reported in the footwear departments of the company.

The Firestone Tire & Rubber Co., Akron, has curtailed its production 5,000 a day, the present output being 27,000, compared with 32,000 during August.

Trenton Factories Busy

A majority of the rubber factories in Trenton, N. J., are operating at capacity or close to capacity. Both the Murray Rubber Co. and the Combination Rubber Mfg. Co. are operating with day and night shifts. The Essex Rubber Co., specializing in footwear accessories, has been operating close to capacity all summer and there are no indications that production will be curtailed for some months to come.

Pays Back Dividends

Directors of the Goodyear Rubber Co. of California have declared a dividend of $1.75 a share to be credited to back dividends amounting to $19.25 a share. In addition the regular quarterly dividend of $1.75 a share was also declared. Both dividends are payable October 15 to stockholders of record October 1.

Hamilton Acquires Victor

In a recent transaction the Hamilton Rubber Manufacturing Co., Trenton, N. J., acquired the equipment and good will of the Victor Rubber Co., Springfield, Ohio.

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RUBBER TRADE VOTES TO OPEN AN EXCHANGE

(Continued from Page 3)

Carolinas, New Orleans and St. Louis, and this firm had to resort to cabling London to execute their orders. Firms in Liverpool, London and Paris, in my recent trip abroad, have shown their desire to hedge their operations in New York, could they do so through a regular establishment.

"I am going to ask C. T. Wilson of C. T. Wilson & Co. and W. E. Bruyn of L. Littlejohn & Co. to serve on a committee to investigate the proper functioning of an exchange in order that the matter may be correctly placed before the trade at the next meeting."

Vote is Unanimous

In compliance with a request, Mr. Henderson read the by-laws which include the naming of arbitration, adjustment and membership committees as well as a board of appeals and a clearing association, all subject to the approval of the trade. At the suggestion of a leading trader, although Mr. Henderson did not wish to press any direct approval, a vote was taken of those present to determine whether they were in favor of the formation of an exchange. The vote was unanimously in favor.

After the committee has had an opportunity to thoroughly study the workings of an exchange, another meeting is to be held.

NEW USE FOR RUBBER LATEX DISCOVERED

Dr. Ditmar, a German chemist who has been occupied with the utilization of rubber latex, is now recommending te treatment of instrument strings of fibrous material with latex, as a result of which they are said to equal catgut in tone. Silk strings are first treated with latex, then with spermaceti or paraffin hydrocarbons and finally with talc or other products giving a high polish. Strings so prepared are also adapted for use in stringing of tennis and other rackets, chairs and the like.

Columbus Sues Henderson

The Columbus Tire & Rubber Co., Columbus, Ohio, recently filed suit in Common Pleas Court of Franklin County against the Henderson Tire & Rubber Co., Columbus, Ohio. The Columbus Tire & Rubber Co. is suing for the sum of $13,250, alleged to be due on account for special brand tubes manufactured for the Henderson company by the plaintiffs.

Leases Branch in Chicago

The Firestone-Apsley Rubber Co., Hudson, Mass., has leased the first floor corner store and basement of the Montauk Building, 501 South Franklin St., Chicago, Ill. Yearly rental is said to be $13,000.

WILMER SEES GRADUAL IMPROVEMENT IN RUBBER

E. G. Wilmer, chairman of the Goodyear Tire & Rubber Co., Akron, who recently returned from a trip abroad during which he studied conditions in England, Holland and France, predicts that "the rubber situation will gradually improve and it will take a year to pick up. There is far from an abundant supply of rubber in the world. There seems to be an indication that the Stevenson plan will be continued.

"I think the industry is doing well here to abolish the practice of spring dating," continued Mr. Wilmer. "At the moment the rubber market is so purely artificial and speculative that a practice which involves heavy shipments to dealers away ahead of their requirements properly involves price protection to them. Under these speculative conditions it is a bad practice for factories and dealers to speculate on spring requirements as heavily as they do."

Hawkeye Reorganized

The old Hawkeye Tire Co., Des Moines, Iowa, which has been through a receivership, is being reorganized by John T. Christie, president of the former company. He becomes president and treasurer of the new Hawkeye Cord Tire Co. Burt Springer is vice president and secretary. Production of oversize cord and low pressure tires is expected to begin in the old plant within six weeks.

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MACHINERY FORMED LARGE PART OF DISPLAY AT TENTH CHEMICAL SHOW

Over 300 Firms Exhibit on Three Floors of Grand Central Palace, New York—U. S. Rubber and DuPont Show New Products in the Court of Chemical Achievement

Many executives in the rubber industry found much to interest them at the Tenth Exposition of Chemical Industries which was held from Sept. 28 to Oct. 3 in the Grand Central Palace, New York, where three floors of the building were filled with exhibits of over 300 firms. The exhibits varied in size from a vat weighing 25,000 pounds to microsopic crystals. Precision instruments, some of which were capable of separating an inch into thousands of parts and others of weighing accurately particles so small as to be hardly visible were shown.

Sprayed Rubber Exhibited

Exhibits of both the U. S. Rubber Co. and E. I. du Pont de Nemours & Co., Inc., in the Court of Chemical Achievement on the third floor were of special interest to the rubber industry. The U. S. Rubber Co. showed samples of latex sprayed rubber, manufactured by the process invented by Ernest Hopkinson, head of the company's development department. Latex sprayed rubber is made by atomizing the latex into a slowly moving current of hot air or gas. Practically the entire production of the company's plantation in Sumatra and Malaya for 1925 will be in the form of latex sprayed rubber. The DuPont company showed, among other products, two new accelerators, Vulcone and Di-Ortho-Tolylguanidine.

Show Rubber-Lined Drums

The exhibit of the Miller Rubber Co., Akron, consisted of rubber lined drums, storage and transportation tanks for chemicals. It was in charge of R. M. Warner. The Wishnick-Tumpeer Chemical Co., Brooklyn, N. Y., displayed a board showing the process of manufacture of Astrolith, the lithopone manufactured by the St. Louis Lithopone Co. They also exhibited samples of whiting, clay, soapstone, Gilsonite, MR, sulphur and powdered mica. A colloid mill was shown by the Premier Colloid Mills, Geneva, N. Y. In an exhibit called "Industrial Hygiene," the N. Y. State Dept. of Health showed pictures of various safety devices in use in factories.

The Louisville Drying Machinery Co., Louisville, Ky., showed models of rotary steam tube dryers and the Louisville Continuous Filtering Machine which is used to press surplus water from washed rubber before it is dried. The Firestone Tire & Rubber Co., Akron, and the Buffalo plant of the U. S. Rubber Reclaiming Co. use these filtering machines. The Philadelphia Rubber Works, Akron, the Hamilton Rubber Mfg. Co., Trenton, N. J. and the Hood Rubber Co., Watertown, Mass., have ordered these machines from the Louisville Drying Machinery Co. J. Credo, vice president was in charge of the display.

The Luzerne Rubber Co., Trenton, N. J., showed a comprehensive display of hard rubber products which included toilet seats, radio accessories, pipes, fittings and buckets. E. Paul Case was in charge of the exhibit. Various products in which white and red lead are used were shown in the exhibit of the Eagle-Pitcher Lead Co., Chicago. Foote Bros. Gear & Machine Co., Chicago, showed speed re-

(Continued on Page 13)

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RUBBER COMPANY SHARES ARE BOOMED IN LONDON

London brokers recently experienced the condition that prevailed last June when congestion and confusion in rubber shares made it impossible for them to execute all their orders. Prices of rubber stocks rose sensationally and were not influenced by the movement of the crude rubber market. There were indications that the buying was largely for investment, although that which characterized the June boom was almost wholly speculative.

The trading extended to a large number of comparatively small companies for whose shares there is usually only a limited market. As the crude rubber market did not reflect the activity of the rubber shares, it led to the belief that buyers were taking a "long view" of the situation.

"Farquhar" Registered

A. B. Farquhar Co., Ltd., York, Pa., long-established manufacturers of hydraulic platen presses and other machinery, has been granted federal copyright on the trade-mark "Farquhar" as applied to all their products. They have had copyright to the name for many years but it is now extended to apply to all additions to their line and to cover all products they manufacture. Farquhar engines have been known for years under the trade-mark "Ajax." The engines will hereafter carry the name "Farquhar."

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AKRON USES 36 PER CENT OF ENTIRE CRUDE SUPPLY

P. L. Palmerton, chief of the Rubber Division, Department of Commerce, recently contradicted the report that Akron factories will consume 60 per cent of the world's supply of crude rubber in 1925.

"Figures recently compiled by the Department," Mr. Palmerton said, "show that of the total rubber consumed in the United States during the first seven months of 1925, barely 50 per cent was used in Ohio, and of course, a smaller percentage in Akron alone. It is estimated that approximately 72 per cent of the world's supply of rubber for this year will be used in the United States, and if consumption in the various states continues during the last five months of the year as it has during the first seven, Ohio will have consumed 36 per cent of the world's rubber. This is considerably different from the published estimate of between 55 and 60 per cent."

Mr. Palmerton called attention to the survey based on reports from 457 American factories showing the percentage of consumption for the first seven months by states and contiguous sections as follows: Ohio, 50.26; Massachusetts and Maine, 10.86; Pennsylvania, Delaware and Maryland, 6.06; New Jersey, 6.01; Wisconsin and Minnesota, 4.95; Michigan, 4.70; Connecticut, 3.69; New York, 3.50; Indiana, 2.67; California, 2.48; Rhode Island, 1.53; Nebraska, Colorado and Missouri, 1.23; Illinois, 1.12; Virginia, North Carolina and South Carolina, 0.32; Iowa, 0.27; Oregon and Washington, 0.14; West Virginia, Tennessee and Kentucky, 0.13; Georgia, Alabama, Louisiana and Texas, 0.09.

To Have New Power House

The Vulcanized Rubber Co., 251 Fourth Ave., New York, is making a number of improvements at its factory at Morrisville, Pa. A modern power house to be 60 by 45 feet, 33 feet in height, is being erected. Four new boilers of 250 h.p. each will be installed. When the new building is completed the old power house will be transformed into a pumping station. New railroad sidings and extensions are also being made in the company's yards.

Bedford Starts Production

The new Bedford Tire & Rubber Co., Bedford, Va., recently started the manufacture of tires. A sales force has been organized to cover Virginia and sections of West Virginia, Maryland and Delaware. Officers are: L. R. Gills, president; W. R. Dooley, vice president and general manager; J. J. Scott, secretary; T. W. Richardson, assistant secretary; J. K. Walker, sales manager, and C. L. Brickman, factory superintendent.

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AUGUST EXPORTS OF RUBBER GOODS, TOTALING $5,043,353, SET NEW RECORD

Volume is Over $500,000 Greater than for Any Month Since 1921 — High Total is Caused by Increased Prices and Improved Demand for American Tires

American exports of rubber manufacturers set a new high monthly record for August when their value was $5,043,353. This is over $500,000 greater than for any previous month since the beginning of 1921. The abnormally high total is not so much the result of higher prices, although an upward trend is noticeable, as of increased trade particularly in automobile tires and tubes, says E. G. Holt of the Rubber Division, Department of Commerce.

Heaviest Tire Exports This Year

Nearly 168,000 automobile casings were exported during August, the average value per casing being $13.09. This compares with 133,300 casings at $11.98 each in July, 126,900 at $11.93 each in June, and 158,300 at $11.61 each in May. Tire price increases have been made in almost every foreign market during the past three months, and further increases are in prospect in countries where initial price changes were small. Naturally, dealers in foreign markets have the same tendency as in America to buy beyond current needs on a rising market; accordingly large exporters should carefully check the market requirements in each country in order to prevent development of any dangerously overstocked condition.

Brazil is an important market which would seem to be well stocked with tires. The automotive registration has increased from 28,000 cars and trucks at the beginning of 1924 to 41,750 this year. During the first six months of this year, the total number of tires shipped to Brazil from the United States, Canada, United Kingdom, France, Italy and Germany is estimated at 143,800 or 5.1 tires per car registered a year ago and 3.4 tires per car at the beginning of this year. The Brazilian market is probably the outstanding example for which statistics can be given, but the apparent existence of obnormal tire stocks there is cited as an example of a condition to be guarded against generally.

New Zealand had 44,864 cars and trucks at the beginning of 1924 and 60,600 this year; and during the first half of this year 128,000 tires were shipped to the market from Canada, the United States, United Kingdom, and Italy, France and Australia also compete on an important scale in New Zealand. It would seem that the market there is carrying heavier stocks than usual. Egypt is another market where stocks would appear to be quite heavy, and possibly Norway also, judging from reported tire exports to these markets for the first half of the year.

On the other hand, typically American markets such as Porto Rico, Hawaii, Mexico, Cuba, and the Philippines are apparently carrying about normal supplies; and the same is true of several markets chiefly supplied from France, such as Algeria, Morocco, Tunis, and Spain.

Four new monthly records for exports of rubber manufacturers were established in August. Solid rubber tiring exports amounted to 188,378 pounds valued at $37,418, beating the previous record month of March, 1923, when 180,078 pounds were shipped. Rubber packing exports totaled 202,463 pounds valued at $86,816 as compared to 195,909 pounds in April, 1924, the previous high month. Miscellaneous druggists' rubber sundries exports, 118,370 pounds valued at $126,329, exceeded the record of 109,298 pounds established in the preceding month. Reclaimed rubber exports have been steadily increasing this year, the monthly record of 812,502 pounds made in April, 1925, was set aside in June with 1,034.289 pounds, and this in turn was superseded by shipments of 1,136,492 pounds in August when the value was $118,194. As an indication of the general trade increase this year, it is noteworthy that of 25 specific classes of rubber products, 17 classes have had new high record months during 1925.

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General Officers Optimistic

At a recent meeting of executives and sales managers of the General Tire & Rubber Co., Akron, W. O'Neil, president G. S. Poor, general sales manager, and Howard Smith, western sales manager, spoke of the prospects of the company. Mr. O'Neil said that the company would depend on new accounts for the 50 per cent increase in production planned for next year. In common with most of the other large companies General will not give the usual spring dating this year, as was agreed some months ago. The advertising program of last year will be repeated.

Although President O'Neil has denied reports that the directors plan a stock dividend or an extra cash distribution, the advance of 50 points in the common stock of the company to $315 a share is held by him to be justified on the basis of higher earnings this year. Indications are that profits will be more than $50 a share on the common this year, compared with $37.50 in 1924 and $30 in 1923. Business has steadily increased since the company was organized. There are 39,908 common shares of $50 par outstanding.

Sales for 1925 are estimated by Mr. O'Neil at $18,000,000, against $13,152,000 last year and $9,000,000 in 1923. With completion of additions to its present plant, the company is preparing to do business of $25,000,000 in 1926.

Profits this year, it is believed, will exceed $2,000,000. The company earned $1,500,000 in 1924 and $1,200,000 in 1923.

IN ATTENDANCE AT THE RECENT AKRON SALES CONVENTION OF GENERAL TIRE

Front Row: G. W. Harker, S. S. Poor, H. F. Smith, W. G. McCruden, H. D. Taylor. Center row: E. F. Thompson, F. S. Fitzgerald, D. A. Kimball, J. B. Cudlip. Back Row: H. E. Taylor, C. H. Boyer, W. J. Shea.

International Organized

According to J. H. Dalbey, president of the Poplar Bluff Rubber Co., Poplar Bluff, Mo., the newly-organized International Rubber Co. is planning to erect a $250,000 factory in Poplar Bluff. The new company, which has an authorized capital of $500,000, will eventually absorb the Poplar Bluff Rubber Co. Cushion inner tubes will be manufactured. Mr. Dalbey was founder of the Rubber Ace Tire Co., Elgin, Ill., manufacturers of the Rubber Ace, the rights to which were recently bought by the B. F. Goodrich Co.

Asks Perfection Dissolution

Harold Pierce, a director of the Perfection Rubber Co., Cleveland, Ohio, recently filed a petition in Common Pleas Court asking a dissolution.

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GATES STARTS $250,000 ADDITION TO FACTORY

Work has started on two new units of the factory of the Gates Rubber Co., 999 South Broadway, Denver, Col., which will be used for the manufacture of molded rubber hose. The new units, fully equipped, will cost approximately $250,000, it was announced recently by Charles C. Gates, president. The two units, Mr. Gates said, are expected to produce 12 miles of rubber hose a day, which is triple the present production of the factory.

The first unit will be the preparing plant; it will cost in the neighborhood of $100,000. The building will be 125 ft. long and 50 ft. wide, and will be of the same style and construction as the other units of the plant. The second, or finishing unit, which will be started this fall, will be 100 ft. wide and 150 ft. long. Both units are expected to be in operation by Jan. 1. The main construction work is being handled by the company itself, in charge of Carl Ahlquist, chief engineer.

According to Mr. Gates, increased demands for hose of all varieties have made necessary the construction of the units. At the present time, despite cramped quarters, the hose department is turning out more than 21,000 ft. or four miles of hose daily.

Rubber Method Patented

Frederick H. Schavoir, Stamford, Conn., was recently granted U. S. Patent No. 1,554,599 on the method and apparatus of making a hollow rubber article consisting of a comparatively flexible section, a comparatively rigid section, and a spud carried by the rigid section. The method consists in placing a spud in the cavity of a suction plunger situated within a mold cavity, in placing stock to provide comparatively rigid section across the mouths of the mold and plunger cavities and in exhausting air from the plunger cavity to draw the stock into the cavity against the spud. The suction plunger is made to recede in the mold cavity to draw the stock into the cavity against the walls and the stock is compressed to shape the comparatively rigid section and to incorporate the spud therein. Stock to provide the comparatively flexible section is placed across the mouth of a form and shaped, and the two sections are then secured to each other.

Asks Sale of Vulcan

An intervening petition asking for discontinuance of all operations at the factory of the Vulcan Rubber Co., West Lake Road, Erie, Pa., was filed recently by an attorney representing H. Muehlstein & Co., Inc., New York, crude and scrap rubber dealers. The Muehlstein company alleges that the Vulcan Rubber Co. owes it $11,791.08 for rubber. It charges that the receiver of the company permitted the receipts from the sales of finished products to be expended for machinery. It is also alleged that M. Liebel, Jr., named receiver and later removed, bought this machinery, valued at $12,000, without authorization of the court. The Muehlstein company asks that the plant be shut down and the assets be sold for the benefit of creditors.

Manhattan to Build

The Manhattan Rubber Manufacturing Co., 120 Broadway, New York, manufacturers of mechanical rubber goods, recently awarded a building contract for the erection of an addition to its factory at Passaic, N. J. The extension will be three-stories, 80 by 140 ft. It will be equipped primarily for increased production, with a portion for warehouse service.

GOODYEAR UNIVERSITY OPENS FOR SIXTH YEAR

The Industrial University of the Goodyear Tire & Rubber Co., Akron opened for its sixth year on September 28 with an enrollment of more than 350 students. All courses have been designed to assist employees in mental development and to fit them for positions of greater responsibility. The program of classes is arranged so as not to conflict with working hours. Instructing in the courses are many well known professors from middle west and southern colleges. In addition to the college courses, several courses of high school grade have been added to the curriculum, and are recognized as equivalent to public high school courses by state school officials.

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FRANK COPEMAN HITS HOOVER AND FIRESTONE

(Special to THE RUBBER AGE*)*

At the sixteenth annual meeting of the Eastern International Rubber & Produce Trust, Ltd., held recently in London, Frank Copeman, chairman, reviewed the present rubber situation.

"The position of the world's stock at the end of June, 1925, as compared with June, 1924, is remarkable. During that period stocks fell in Britain by 50,310 tons; in the U.S.A., by 16,000 tons; in Amsterdam by 1,150 tons. Exports from producing countries, however, show a very large increase, and this increase is likely to continue in a more pronounced form during the next few months. At present stocks are dangerously low, but probably a gradual replenishment will be experienced.

"The reduction in stocks and the consequent improvement in price is mainly attributable to increased demand. The recent abnormal prices have been brought about by speculation and bad buying methods of a certain section of manufacturers. Similarly, the unremunerative prices of the early part of the year were due to the bad selling methods of a certain section of the producers.

"A study of the figures of receipts and deliveries, bearing in mind the quantity to be delivered under forward contracts, shows that a comparatively small tonnage of rubber has gone into consumption at the high spot prices of the last few months.

"According to Secretary of Commerce Hoover, the present prices 'make profitable the chemical reclamation of much larger amounts of used rubber for re-use, and previous experience indicates that our domestic consumption can be supplied up to 40 per cent from this source, instead of about 20 per cent, which maintains when rubber is below 35 cents per pound.' Double the quantity of reclaim in the manufacture of any rubber article might eventually be of advantage to producers on the ground that the article so made would wear out more quickly than the article made with a usual proportion of pure rubber—the reclaimed and the pure rubber would be wearing out together.

"No manufacturer would like it to be known that he was lowering the quality of his goods by the use of a larger quantity of reclaim. It would not be a good advertising slogan for, say, Harvey Firestone to announce that, owing to the high price of rubber, produced mainly in British Colonies, his tires contained 40 per cent of reclaim. The use of larger quantities of reclaimed rubber or of substitutes—even as a temporary counter against high prices—is dangerous to the ultimate welfare of the plantation industry.

"If what Secretary Hoover says is correct, and United States consumers were to decide, even temporarily, to reduce the quantity of pure rubber used by the percentage indicated, then, for a time at least, we should find stocks again becoming unwieldy, with a consequent fall in price to an unprofitable level."

N.T.D.A. TO HEAR TALK ON SIMPLIFIED PRACTICE

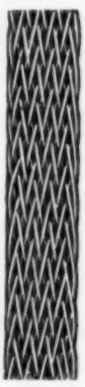
R. M. Hudson, chief of the Division of Simplified Practice of the Department of Commerce, will address the members of the National Tire Dealers' Association at their annual convention on November 17 at St. Louis, Mo. He will give the tire dealers a general explanation of the work of his division, indicating the progress that has been made in other industries by the application of simplification and standardization. The address will be illustrated by stereopticon slides. Mr. Hudson will emphasize the possibilities in the field of tires, tubes and accessories for the elimination of unnecessary sizes.

Tire Machine Patented

Harold A. Denmire, inventor of a tire-making machine recently granted U. S. Patent No. 1,554,798, has assigned the patent to the General Tire & Rubber Co., Akron. The machine contains means for rotatably supporting an annual core, a slide, two levers pivoted thereon in position such that their rear ends may lie on opposite sides of said core. A knife block is pivoted on each lever near the rear end. Means are not only provided for simultaneously swinging the levers on their pivots to move their rear ends toward and from each other but for turning and controlling the turning of the blade blocks upon their pivots as the levers are swung.

In general Factice may be used in any department of the industry in quantities up to 10% of the total compound. It's use will give the following effects:
1.—Increase in general smoothness.
2.—Decrease in tendency to mill burning.
3.—Decrease in tendency to scorching in the tubing machines.
4.—Decrease in the specific gravity of a compound high in mineral fillers.
5.—Imparts a stickiness and ease of working to certain types of low priced reclaimed rubber compounds.
6.—Gives "tackiness" to certain compounds containing dry reclaimed rubber which are used for frictioning cloth.
From "The Practical Side of the Use of Factice."

RUBBER FACTICE OF HIGHEST QUALITY THE STAMFORD FACTICE STAMFORD CONN THE STAMFORD RUBBER SUPPLY CO



Perfect Beads

Entire freedom from bead trouble in the construction of straight side tires is assured by the use of either National "(Patent)" High Tensile Strength, Flat Woven, Bead Braid or our new (Pratt Patent) Bead Cables. These cables, made to dimensions specified, have seven strands, yet only one piece of wire is used without soldered, welded or brazed joint.

Write for working samples of either National flat braid or Pratt cables (no charge to tire manufacturers) and full information as to our products and service.

Our engineering department tests beads and furnishes complete confidential reports as to their stretch, set and bursting point, without charge. Inquiries solicited regarding this special service.

National Standard Company
Niles, Michigan

Est. 1900 Inc. 1919

THE KUHLKE MACHINE CO.

Formerly Jones & Kuhlke

AUTOMOBILE TIRE MOLDS and CORES

GENERAL MACHINE WORK

Akron, Ohio

THE I. B. KLEINERT RUBBER CO.
is Headquarters for

Dress Shields	Reducing Garments	Powder Puff Pockets
Guimpes	Rubber Sheetings	Tourist Cases
Baby Pants	Hose Supporters	Bibs
Crib Sheets	Household Aprons	Dress Protectors
Bathing Caps	Shirlastic Ribbon	Sanitary Goods

GUARANTEED Kleinerts REG. U. S. PAT. OFF.

I. B. KLEINERT RUBBER CO., 485 Fifth Avenue, New York

AMAZON VALLEY REPORT TO BE PUBLISHED SOON

The long awaited report of the Department of Commerce on the possibilities of rubber plantations in the Amazon Valley will soon be published it was learned recently. The report is the fourth in a series of six compiled under Congressional authorization in an effort to find areas for rubber growing outside the region controlled by the British.

Although the report has not yet been made public, the scope of the investigations and the general nature of its conclusions are known and may be stated as follows:

Scope of the Report

The necessary physical conditions, including proper soil, suitable climate and favorable topography, exist in many localities and over extensive adjacent areas in the Amazon valley, in regions easily accessible, but where there are not adequate facilities either for rail or water transportation.

The area of the Amazon region regarded as potentially suitable for rubber growing roughly extends along the equator for thirty degrees, or a distance of about two thousand miles.

It is understood that the impression gained by the investigators was favorable.

The two chief problems confronting the prospective rubber planter in the Amazon Valley are transportation and labor, since it is well known that enormous areas furnish all the other requisite conditions. Ocean-going vessels may ascend the Amazon above Iquitos, Peru, and Tapajoz, Madeira, and Purus for considerable distances from the junction of the main stream.

Areas near these water courses and to a less degree areas adjacent to connecting water courses which can be used the year round by boats of medium capacity may be considered as best from the transportation standpoint. Excellent natural conditions exist in other regions, but lack of transportation eliminates them from present consideration.

It is believed that 30,000 laborers are obtainable in the Amazon Basin, or a number regarded as sufficient for the cultivation of about 150,000 acres of rubber plantations. The usual wage for laborers in the lower Amazon is about 25c to 35c a day, but is somewhat higher in the upper Amazon region.

Public lands of extensive areas may be obtained in the state of Para, Amazonas, Motto Grasso, and in the Amazon regions of Peru and Ecuador at purely nominal prices.

Brazil Willing to Lower Taxes

The governmental authorities of Brazil have indicated their willingness to lighten or remove export taxes as an encouragement to rubber planting, Peru has no tax on export rubber, and the Bolivian tax is low.

The inquiry apparently has developed the fact that there is no hope that the wild rubber production of the Amazon can ever be pushed to a point where it will meet the world demand.

FULL RIGHTS TO HEXA OBTAINED BY GRASSELLI

The Grasselli Chemical Co., 347 Madison Ave., New York, have acquired full rights to Hexamethylenetetramine, an accelerator for the vulcanization of rubber. The Heyden Chemical Co., of America, Inc., recognizing the validity of U. S. patent No. 1,149,580, covering this accelerator, have withdrawn it from sale and Grasselli Chemical Co. has acquired this portion of the former company's business. The Roessler & Hasslacher Chemical Co., 709 Sixth Ave., New York City, as a Licensee of the Grasselli Chemical Co., is authorized to sell Hexamethylenetetramine. This accelerator has been sold and will continue to be sold under the name of Grasselerator 102.

Grasselli Department Moves

The Rubber Accelerators Department of the Grasselli Chemical Co., which has been located at 117 Hudson St., was recently moved to 347 Madison Ave., New York, and will henceforth be known as the Rubber Service Department. H. H. Replogle, who is well-known in the rubber industry, is sales manager of this department.

Allegheny Rubber Formed

The Allegheny Rubber Co., Manorville, Pa., was recently incorporated to manufacture rubber products. Authorized capital is $5,000. Incorporators are A. C. Hileman, W. Haufman and G. R. Dapper.

CABARRUS COTTON MILLS

M. L. CANNON
PRESIDENT & TREASURER

KANNAPOLIS, N. C.

Superior Quality Tire Fabrics

EGYPTIAN-PEELER
KARDED & COMBED
CORD & SQUARE WOVEN

CANNON MILLS, Inc.
Selling Agents

NEW YORK
55 Worth St.

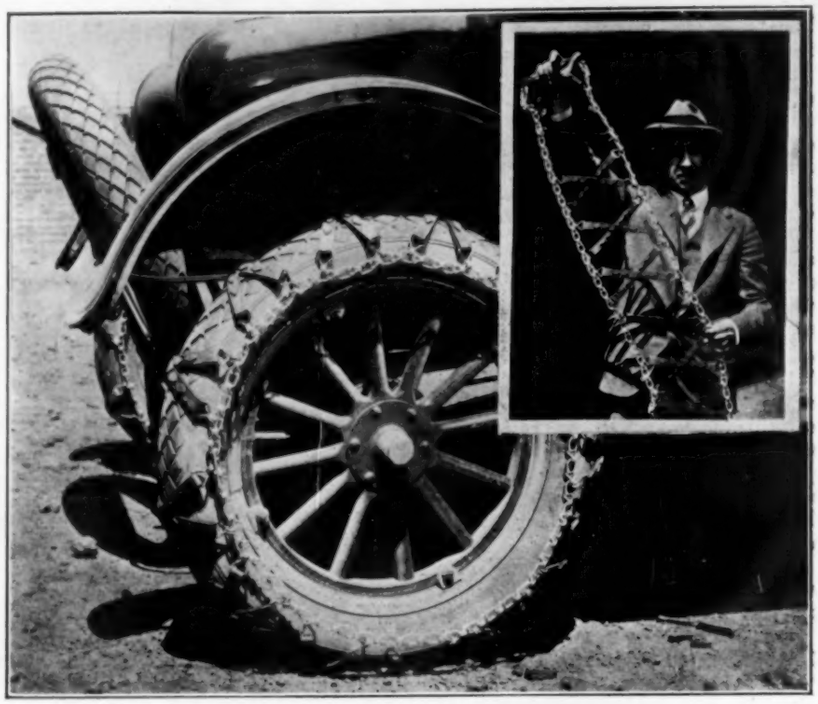
CHICAGO
327 S. La Salle St.

A. W. REID
Representative

RUBBER NON-SKID CHAIN PERFECTED BY GOODYEAR

The Goodyear Tire & Rubber Co., Akron, has perfected a rubber cross-link non-skid chain and will soon begin its manufacture in a department at the Akron plant to be devoted solely to its production. The chain is constructed with a fabric insert vulcanized into a tough compound of tread rubber designed in the form of an X. In the four ends of this rubber cross-link are galvanized steel hooks, built in by vulcanization. The four hooks are hooked into steel side chains.

Advantages claimed for the chain include resistance to lateral skidding, which is prevented by the angle of the all-weather tread buttons. Because of the shape of the cross-link, which pulls toward the center of the tire when in motion, the rear end of the car is kept from swinging in case of a sudden stop. Once the chains are applied, there is said to be no need to remove them all winter because the smooth surface of the chains against the treads of the tire eliminates cuts that are often made by all steel chains. Exceptional traction is ascribed to the chain, which is said to be long-wearing because made of compounded tread stock. The chain is to be manufactured for both balloon and high pressure tires.



The Goodyear Rubber Non-Skid Chain

Wenstone Factory Sold

The factory of the Wenstone Rubber Products Co., Chippew Falls, Wis., was sold at a recent sheriff's sale for $6,961.-64. Only one bid was made which was that of a representative of Samuel J. Andalman, of Chicago. No definite plans for the disposition of the factory have been made by Mr. Andalman, who is the holder of $55,000 of the $60,000 bonds. He was obliged to buy the plant to protect his interests, he stated.

Creditors to Get Dividends

General creditors of the Newark Rubber Co., Passaic, N. J., which has been in the hands of a receiver since July 1, 1921, will shortly receive the first and last dividend. George H. Dalrymple, receiver, recently filed a report which showed receipts of $102,346.94 and disbursements of $77,953.81, leaving a balance for expenses and a dividend for unsecured creditors whose claims aggregate $87,-159.63. For his services Mr. Dalrymple asks $5.000 and Riker & Riker ask $2,000 for legal services. Vice-Chancellor Backes, to whom the report was submitted, made an order to show cause why the allowances asked should not be granted and the account approved.

Economy Leases Plant

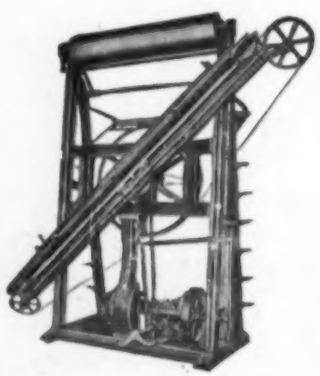
The Economy Rubber Products Co. has leased 30,000 square feet of floor space in the Davis Factory Community, Dayton, Ohio. The Economy company manufactures tire accessories in its present quarters at 650 S. Main St. where 50 men are employed. This number will be trebled when the new plant is completed, it was said by Harry and Jacob Dubin, owners.

Springdale Rubber Formed

The Springdale Rubber Corp., New York City, was recently chartered with $50,000 authorized capital to manufacture rubber products. Incorporators are William M. Shacknow, 1030 Hoe Ave., Bronx; M. Posner, 237 South 9th St., Brooklyn; and F. Harstein, 75 Linden St., Brooklyn.

Van Riper Promoted

L. A. Van Riper, formerly sales manager of the Racine Division of the Ajax Rubber Co., New York, has been advanced to the position of general sales manager of the company. Mr. Van Riper has come up through the ranks of branch and division manager. F. M. Hoblitt, vice-president, continues in charge of general commercial affairs of the Ajax company but is devoting more of his time to assisting J. C. Weston, the president.



The Bolton Vertical Bias Cutter

Accuracy with Speed

Cuts Cord or Flat Woven Fabrics with equal ease and precision.

Cutting range—¼" strips to 60" bias blocks—on any angle from the horizontal to 45 degrees.

In use in tire and rubber plants throughout the world.

SPADONE MACHINE CO., Inc.

15 Park Row New York, N. Y.

Foreign Representative, FRANCIS SHAW & CO., LTD., Bradford, Manchester, England

MACHINERY FORMED LARGE PART OF CHEMICAL SHOW

(Continued from Page 5)

duction units. The Cooper Hewitt Electric Co. exhibited their mercury vapor lamps. The DeLaval Steam Turbine Co., Trenton, N. J., showed pumping equipment and worm reduction gears.

The exhibit of the New Jersey Zinc Co., 160 Front St., New York, was a large one in which were shown the many products in which their products are used, with emphasis on rubber goods. The various products themselves were also shown. The Thermo Electric Instrument Co., Newark, N. J., showed the Freas Aging Oven for aging rubber. Recording pyrometers, recording thermometers and recording pressure gauges were shown by the Brown Instrument Co., Philadelphia. Recording instruments were also shown by the Bristol Co., Waterbury, Conn.

The Sowers Mfg. Co., Buffalo, showed a battery of Dopp mixers in use and sections of Dopp kettles, as well as other products. The exhibit was in charge of C. M. DeForest and H. B. Underwood. Recording temperature instruments were shown by the C. J. Tagliabue Mfg. Co., Brooklyn, N. Y. D. C. Day, assistant sales manager, was in charge The Buffalo Foundry & Machine Co., Buffalo, showed "Buflovak" dryers. Among the exhibits of the Eastman Kodak Co., Rochester, N. Y., were samples of rubber made by electrodeposition.

Among the executives of rubber and allied companies who visited the Chemical Show were: H. B. Undewood, chief chemist, Ajax Rubber Co., New York; F. M. Leahy, purchasing agent of the Ajax Rubber Co., E. L. Bullock and E. F. Stumff, E. L .Bullock & Sons, Inc., New York; Raymond Cilley, chief engineer, Dickison Cord Tire Corp, Nutley, N. J.; H. E. Fritz and J. R. Silver, Jr., B. F. Goodrich Co., Akron; W. E. Glancy, laboratory manager, Hood Rubber Co., Watertown, Mass.; W. L. Sturtevant, chief chemist, Manhattan Rubber Mfg. Co., Passaic, N. J.; Lewis E. Dickinson, Jr., National India Rubber Co., Bristol, R. I.; A. C. Howard, N. Y. Belting & Packing Co., Passaic, N. J.; E. H. Grafton, chief chemist, Quaker City Rubber Co., Philadelphia, Pa.; E. H. Darby, technical superintendent, Rome Wire Co., Rome, N. Y.; J. W. Baker, Rubber Regenerating Co., Naugatuck, Conn.; and W. H. Larkin, Jr., U. S. Rubber Co., Passaic, N. J.

Pittsburgh at Capacity

Approximaely 200 tires a day are being manufactured at the factory of the Pittsburgh Rubber Co., East Liverpool, Ohio, which recently bought the plant of the defunct McLean Tire & Rubber Co. More than 50 workers have been given employment. An effort will soon be made to increase the capacity of the plant to 600 tires a day, according to W. S. Thomas, vice-president in charge of production.

TO SHIP SPRING TIRE STOCKS AFTER MARCH 1

Leading tire manufacturers in Akron have decided to discontinue all spring dating on tires for the rest of the year, their action as reported in our last issue, confirms rumors that have been current since early in July.

To eliminate artificial stimulation of tire production, no spring orders will be solicited until after Jan. 1 by Goodrich, Goodyear, Firestone, Miller, General, Seiberling and Kelly-Springfield. This policy also will be followed by the following firms outside of Akron—Dunlop, United States, Fisk, Hood and Ajax.

Officials of these concerns believe that the plan will enable the rubber industry to produce during the winter months only at the rate required to meet the spot demand. Production will be gradually reduced by the normal seasonal decline in consumption. Dealers' spring stocks will not be shipped earlier than March 1, it is reported, except in cases where transportation conditions make earlier shipments advisable.

The ultimate effect of this new policy on spring datings is expected to be beneficial, manufacturers stated, and tire retailers look upon the decision as a direct response to their appeal made last spring at their national convention in Akron, asking that the practice of spring dating be discontinued. The new policy was first recommended by the Rubber Association of America, and lower prices for tire consumers may be the ultimate result.

Aero Brand
DPG
DIPHENYLGUANIDINE

Highest purity - uniform quality - reliable shipments - dependable supply - these have become synonyms for Aero Brand.

Aero Brand D. P. G. Stock Is Carried at

Warners, New Jersey
Akron, Ohio
San Francisco, California
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Montreal, Canada
Toronto, Canada
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Address all communications to New York office

AMERICAN CYANAMID CO.
511 FIFTH AVENUE NEW YORK, N. Y.

Rubber Substitutes

WECCO

ALL GRADES

SAMPLES FURNISHED

MANUFACTURED BY

THE WESTMINSTER CHEMICAL COMPANY

531 South Peoria St., CHICAGO

Announcement

HEYDEN CHEMICAL CO. of AMERICA, Inc.

HAVE RECOGNIZED AND ADMITTED THE VALIDITY OF U. S. PATENT No. 1149580 AND ACCORDINGLY HAVE CEASED TO OFFER

HEXAMETHYLENETETRAMINE

as an accelerator for the vulcanization of rubber, having turned over to us this portion of their business.

We are prepared to give prompt service at all times on orders and contracts.

This popular and safe accelerator, prepared specially for rubber work, is sold by us as

GRASSELERATOR 102

under U. S. Patent No. 1149580, which we own and control. HEXAMETHYLENETETRAMINE is also sold by The Roessler & Hasslacher Chemical Co., 709 Sixth Avenue, New York, as our licensee.

THE GRASSELLI CHEMICAL COMPANY

RUBBER SERVICE DEPARTMENT

347 MADISON AVE. NEW YORK

The 8th Birthday of the *R&H* Rubber Service Department

Celebrated by an increase in personnel and equipment

The fall of 1916 saw the first commercial use of modern accelerators. The establishment of the R&H Rubber Service Department promptly followed, August 17, 1917.

The pioneer entry into the field of rubber service marked a new era for us, as we furnished the rubber manufacturer for the first time with authoritative information on rubber chemicals for the improvement of his processes.

In the eight years of this department's existence thousands of tests have been made in conjunction with exhaustive research work. The result has been to place at the disposal of the whole rubber industry a fund of useful knowledge which serves as a basis for further experiments in adapting commonly used accelerators to the compounds of individual manufacturers.

The R & H Rubber Service Department has likewise been of added value to R & H customers through the solving of knotty accelerator problems in the manufacture of all classes of rubber goods.

The department is composed of experienced rubber men who are intimately acquainted with factory processes, and who know rubber from the plantation to the finished article. It embarks on its ninth year with an increased force and enlarged facilities. Cooperation is the keynote of the Rubber Service Department so you are invited to make use of its facilities and information without charge.

The
ROESSLER & HASSLACHER CHEMICAL CO.
709 Sixth Avenue, New York

TIRE OUTPUT INCREASED ONE PER CENT IN JULY

Shipments of tires exceeded production by a considerable margin in July, according to recent statistics of the Rubber Association. This resulted in reductions of inventories. Production of tires in July was 4,190,686, or less than one per cent above June figures but shipments totaling 4,723,431 fell off seven per cent in that period. The situation was reversed in the case of tubes; production totaled only 5,658,214 or less than 50 per cent of the June total but shipments showed a one per cent increase, reaching 6,855,042.

Inventories of both casings and tubes showed a decline for July. Production of solid and cushion tires fell off from 85,036 to 75,228 but shipments showed a decrease. Inventories of solid and cushion tires were lowered during the month.

Balloon Production Declines

For the first time since the beginning of the year, production and shipments of balloon tires showed a decline as compared with the previous month and production exceeded shipments. Production of balloon casings in July totaled 1,564,629, as compared with 1,729,121 in the preceding month. Production of high pressure cords was lower in June but shipments were higher. Fabric tire output was higher but shipments were lower.

Balloon inner tubes also showed a decline for July in production and shipments. Shipments and production of high pressure tubes increased but shipments exceeded production with a consequent reduction of inventories. Shipments and production of solid and cushion tires were well below the level of the preceding month.

The amount of crude rubber used in the manufacture of tires in July was 53,197,164 lb., a slight reduction from 53,366,781 lb. used in the previous month. During the month of July cotton fabric consumption amounted to 16,013,761, an increase over June figures of 15,840,498.

Factory Figures for July

	July	June	July, 1924
ALL CASINGS			
Inventory	4,815,498	5,432,351	5,138,474
Production	4,190,686	4,063,222	2,552,329
Shipments	4,723,431	5,052,529	3,561,110
ALL TUBES			
Inventory	6,476,566	7,806,787	6,634,022
Production	5,658,214	8,739,576	3,857,289
Shipments	6,855,042	6,773,887	5,392,253
HIGH PRESSURE CORD			
Inventory	2,502,055	2,870,827	3,028,785
Production	2,181,645	1,894,704	1,632,380
Shipments	2,479,160	2,610,409	2,148,581
BALLOON CASINGS			
Inventory	1,654,629	1,527,684	715,844
Production	1,561,896	1,729,121	365,213
Shipments	1,434,981	1,573,062	393,132
FABRIC			
Inventory	658,814	1,033,840	1,393,845
Production	447,145	439,397	554,736
Shipments	809,290	869,058	1,019,397
HIGH PRESSURE INNER TUBES			
Inventory	4,677,647	5,910,609	5,925,924
Production	4,297,495	3,566,099	3,545,956
Shipments	5,357,295	5,173,477	5,084,015
BALLOON INNER TUBES			
Inventory	1,798,919	1,896,178	708,098
Production	1,360,719	1,640,465	311,333
Shipments	1,497,747	1,600,410	308,238
SOLID AND CUSHION			
Inventory	152,537	153,098	202,850
Production	75,228	85,036	42,494
Shipments	74,715	90,942	51,449

ARTIFICIAL RUBBER FROM POTATOES

The first German crude rubber works, "Edrog," Wiebe and Konsorten, Hanover, Karmarsch-Strasse 6, recently announced that they have produced from potato preparations a rubber which can compete with the natural product. Isoprene is understood to be isolated from potatoes and their by-products and converted into a mass similar to crude rubber. This product is then converted into a caoutchouc that is said to possess even greater elasticity than the natural. The price is said to be 20 per cent lower than the present price of natural rubber. Daily production of the German plant is said to be 1000 kg.

Parkland Tire Organized

The Parkland Tire & Rubber Co. was recently incorporated, with the following officers: Henry W. Imorde, president; John D. Cary, vice-president; A. F. Faure, secretary and treasurer; and Herbert W. Lantz, factory manager. Other incorporators are Ben H. Imorde, William J. Imorde and George Miller, Jr. The company recently purchased a factory at 26th and Howard Sts., Louisville, Ky., which will be placed in operation as soon as possible for the manufacture of balloon and high pressure tires. It is expected that employment will be given to 100 men.

British-American Sold

Pursuant to a decree of the District Court of the United States for the District of Connecticut, the property of the British-American Mfg. Co., Springdale, Conn., was sold at a recent public auction to Harriette C. McKeever, the highest bidder. An application to confirm the sale will be made to Judge Edwin S. Thomas on October 9.

Servus Gets Large Order

According to Judson J. Adams, president, the Servus Rubber Co., Rock Island, Ill., recently received from M. D. Ettla, the company's foreign representative, an order for 100,000 pairs of rubber footwear. The Adams, Montgomery Co., London, placed the order, which calls for 4,166 cases, 24 pairs to a case.

Fisk Officers Return

Harry T. Drum, president, and J. D. Anderson, vice-president of the Fisk Rubber Co., Chicopee Falls, Mass., recently returned from Europe on the *Olympic*. They had devoted two months to a study of the rubber situation and the foreign markets for tires.

Gillette Damage Small

R. W. Hutchens, vice-president and factory manager of the Gillette Rubber Co., Eau Claire, Wis., recently denied the published reports that $500,000 damage had been done to the factory in the recent fire. He said that the loss will not exceed $100,000 and is entirely covered by insurance. The fire occurred at three o'clock in the afternoon and at seven the next morning all departments were in operation, with the exception of the curing room, which was in operation again on the following morning. On the third day after the fire the factory was in full production. Employees were for a few days working in the curing room without a roof over the building but this has now been replaced.

Welton Joins McMyler

P. E. Welton of Akron, Ohio, whose engineering experience in the rubber industry covers a period of twenty-five years has joined the organization of the McMyler-Interstate Co., Cleveland, Ohio.

Mr. Welton is in charge of the rubber division of this company and several former members of the P. E. Welton Engineering Co. are associated with him in the development of a line of rubber machinery. It is understood that a watch-case vulcanizer and an internal mixer will be among the first machines put on the market. An announcement to the trade is expected at an early date.

FOR LEASE

RUBBER PLANTATION

Located in South Sea Islands, comprising over 5500 acres of which more than 1000 acres are planted to Hevea Brasiliensis species. Age of trees about 20 years.

Recent expert examination estimates annual production at over 350 pounds per acre.

WILL LEASE for 40 YEARS

Rental adjustable every 10 year period depending upon price of rubber, etc. Production not affected by Stevenson Act.

Immediate reply necessary as time is limited. Only principals considered.

Address.

HOWARD THROCKMORTON

756 S. Spring St., Los Angeles, Cal.

TUCKER PROPOSES AN ANNIVERSARY DINNER

As the proposed American rubber exposition has been postpond, Quincy Tucker has suggested the celebration of the 100th anniversary of the founding of the rubber industry might be marked by a dinner in order that the centennial may not be forgotten. He suggests that about the middle of November a dinner be held in Boston, in which city Thomas Wales established a rubber footwear plant in 1825. It will be recalled that Thomas Wales obtained the proper shape for the rubber shoes by shipping wooden lasts to the Amazon, and the smoke cure in thin layers direct from the latex proved the only successful method until Goodyear's discovery in 1839 (also near Boston).

Interested executives are invited to write to Quincy Tucker, 126 State St., Boston, Mass.

Personals

T. Henry Williams, formerly with the Goodrich & Birmingham Iron Foundry, Derby, Conn., has joined the staff of the Akron Rubber Mold & Machine Co., Akron.

* * *

Two Akron scoutmasters, Joseph C. Gadel of the Goodyear Tire & Rubber Co. and H. Parker Lowell of the Akron Times-Press, recently completed a 2,000 mile "dog-team" trip through the east from Maine to Virginia. They hiked only 70 miles of their journey, doing from Boston to New York on a freight steamer and receiving many lifts from motorists. They were away five weeks.

* * *

Harvey S. Firestone, president of the rubber company bearing his name, will appear as president of the Ohio Council of Churches at Columbus, Oct. 12 and 13 when that body meets for its annual session.

* * *

C. B. Hudson, formerly in the Goodrich development division, has succeeded H. D. Richard as chief engineer of the Akron Standard Mold Co. Mr. Richard resigned to join the Racine Horseshoe Tire Co., Racine, Wis.

* * *

M. C. Wyatt, general manager in charge of operations of the Triangle Tire & Rubber Co., Canton, Ohio, recently returned from Cincinnati where he was successful in contracting for a large volume of fall tire business.

Executives on Committee

Jacob Pfeiffer, president of the Miller Rubber Co.; M. O'Neil, president of the General Tire & Rubber Co.; C. E. Stillman, secretary of the Goodyear Tire & Rubber Co.; C. B. Raymond, vice-president of the B. F. Goodrich Co. and R. E. Lee, superintendent of labor at the Firestone Tire & Rubber Co. are members of the budget committee of the Better Akron Federation of which Edward S. Babcox, president of the *India Rubber Review* is chairman.

THREE BIDS ENTERED FOR HODGMAN RUBBER

Federal Judge Winslow recently took under consideration three bids made for the assets of the Hodgman Rubber Co., Tuckahoe, N. Y. Albert I. Collins, Brooklyn, N. Y., bid $400,000; Max Marr, representing Conrad Huber, president of the Yale Electric Co., offered $600,000; and the Paramount International Rubber Co., Paris, France, also bid $600,000.

Kase-Quinby Exhibits Goods

The Kase-Quinby Rubber Co., Inc., New York, recently held an exhibition of rubber specialties at the Palmer House, Chicago. E. C. Paton, vice president and Clarence Busz, Chicago representative, were in charge.

Dovan Registers Trade-Mark

The Dovan Chemical Corp., 30 Church St., New York, recently registered the trade-mark "Dovan" in the U. S. Patent Office under Ser. No. 218,452. The trade-mark, which consists of the word "Dovan" contained in an oval, has been used since last July on chemical for compounding rubber.

Miller Leases Space

The Miller Rubber Co., Akron, has leased space in the building at 144 Duane St., New York, in the wholesale boot and shoe district.

How Should Rubber be Dried?

The Rubber Shortage demands economy in crude and reclaim preparation.

Carrier Drying Systems, including the well known Hunter Process, produce uninjured and uniformly dried stock. These Systems assure reduction in time, space, labor and milling costs.

Write for details.

Carrier Engineering Corporation

Offices and Laboratories
750 Frelinghuysen Ave., Newark, N. J.

"WHITE FLOSS"

CLAY

WATER GROUND WATER FLOATED

Highest Test for the Rubber Trade
IN
Gravity — Fineness — Abrasion — Hardness — Tensile Strength — Moisture Content (practically bone dry) — Absolute Uniformity.

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Fisk May Pay Back Dividends

Reports are current in the New York financial district that directors of the Fisk Rubber Co., New York, with factories at Chicopee Falls, Mass. and Cudahy, Wis., have been considering the payment of back dividends on the first preferred stock. An announcement about this is expected soon. Dividends on this stock were resumed last February. The total accumulation, it is understood, which amounts to 26 per cent, will be paid off with interest-bearing paper, a plan considered to be favored by many stockholders because it would place the common stock in line for dividends. August sales of the company were $6,500,000 and net profits about $1,200,000 after depreciation, interest and taxes. September sales are estimated at $5,500,000 and net profit at $800,000.

Buckeye is Prosperous

According to M. J. Rentschler, president, the Buckeye Rubber & Mfg. Co., Willoughby, Ohio, has been doing the largest business in its history during the last few months. The financial condition of the company has been on the ascendency since last January when Charles E. Hyde, manager and secretary, took active charge of the plant. Mr. Hyde was for 17 years general manager of the Western Rubber Co., Goshen, Ind. Since last January $60,000 worth of new equipment has been added and the company plans to spend another $30,000 on the factory. The factory uses 15 tons of crude and 60 tons of reclaimed rubber a month.

Keaton Starts Production

The Keaton Tire Co. recently began production in a tire factory recently completed in San Francisco. Although the tire invented by R. H. Keaton, president, has been on the market for years, it has been manufactured for the company, which will now produce its own.

North Eastern Sales Good

According to A. O. Murray, sales manager, July sales of Extensor endless rubber flaps for clincher tires manufactured by the North Eastern Rubber Co., Elizabeth, N. J., exceeded any month in the history of the company. When sales figures are compiled, it is probable that the August volume will be even larger.

Heel Mold Patented

Leon B. Conant, Cambridge, Mass., was recently granted U. S. Patent No. 1,554,989 covering a mold for rubber heels which consists of fibrous material and a rubber tread. The mold comprises a center plate, a face plate and a back plate. The upper section of the center plate is larger laterally than the lower section to form a shoulder upon which the material may be forced by pressure.

Kelly Plant in Akron Closed

The Akron factory of the Kelly-Springfield Tire Co. was permanently closed Thursday, Oct. 1, and activities of the company will be consolidated in the future at the newer plant at Cumberland, according to an announcement by Lewis Miller, general superintendent. The Akron plant which began operations in 1914, has been operating on a full time basis since last spring and has produced as many as 3500 tires daily and employed 600 men when running at full capacity. Some of the employees will be transferred to Cumberland, but several hundred employees will be affected by the change.

Mohawk Adds Two Sizes

The Mohawk Rubber Co., Akron, recently began the manufacture of two new tire sizes, the 29 x 4.95 low pressure and the 30 x 5 heavy duty truck, 8 ply and 19 per cent oversize.

Miller Assigned Mold

The Miller Rubber Co., Akron, has been assigned U. S. Patent No. 1,554,986, granted to George W. Bulley on a mold member having a body of relatively soft metal and a facing plate of hard metal. The mold member has a mold cavity the edge of which is formed by the edge of the hard metal.

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GENERAL DISTRIBUTORS MEET IN ATLANTIC CITY

The annual Eastern district convention of General Tire distributors was held at the Ambassador Hotel, Atlantic City on October 1st and 2nd. This Eastern convention was the first of a series of the General distributors meetings which are held in all sections of the country each year. All General Tire distributors in the section from Maine to Virginia were present. Invitations were extended to prospective dealers who are being considered for the General franchise in their respective towns. The conference was conducted by S. S. Poor, sales manager, whose office is in New York City. Speakers for the convention were W. O'Neil, president; T. F. O'Neil, secretary; A. B. Stiller, advertising manager; and Mr. Poor.

The following salesmen were present with their distributors—C. A. Priest, Maine; H. E. Schneider, Pennsylvania; T. J. Ryan, Western Massachusetts and Eastern New York; H. A. Bellows, Virginia; R. B. Roche, Delaware, Maryland; R. P. Quinn, Connecticut; and J. H. MacDonald, J. M. McVey, J. C. Pepper, L. A. Jackson, T. H. Kieran, Wm. D. Byrne, New York City.

General operates with the policy of exclusive distributors in town and bases the volume of the company's business on the work of their distributors instead of relying on manufacturers equipment. President O'Neil has built his business to its present enviable position on the policy that the distributor must first be educated to build up his own business on a profitable and successful basis and the success of the manufacturer is bound to follow.

It was five years ago that the General company began holding conventions in all parts of the country so that the president of the company and all other company executives could come in personal contact every year with every distributor, a system of cooperation which it is said, has never been attempted by any other company. General was the company that started the ball rolling to eliminate consumer price list advertising when declines took place and in numerous questions of this kind where the best interest of tire dealers had to be protected. General has played a leading role because the very foundation of the growth and success of the company and the primary principle on which the business was founded has been and will always be the idea of making their business grow according to the success and growth of their dealers, the idea that unless their distributors are contented and making money the company can not continue to thrive. From a survey made of their organization it was found that four out of every five distributors who had been with General for two years or more were making good which is far greater than the success average in other lines of merchandising.

Previous to the time when W. O'Neil and W. E. Fouse organized the General Tire and Rubber Company, they were tire distributors themselves in Kansas City. Being in a position to observe and feel the need of closer relationship between manufacturer and distributor they realized that a company organized on that basis should be able to build up the largest and most successful distribution organization in the country. It is these facts that give General a clearer insight into dealer's problems and is responsible for the mutual cooperation existing between the General dealer organization and the factory.

The General organization is planning on their usual 50% increase in production for 1926. This will give them a volume of $25,000,000.00 or about four times the volume of business done by any other manufacturer not depending on original equipment business.

DAYTON TO INCREASE OUTPUT 25 PER CENT

The Dayton Rubber Mfg. Co., Dayton, Ohio, is planning for an increase of 25 per cent in production next year, according to J. A. MacMillan, president and general manager. Present production is 2,000 tires and 3,500 tubes a day. Net earnings of the company before payment of Federal income taxes exceeded $200,000 for the first six months of 1925, and the second half is expected to be even better, said Mr. McMillan.

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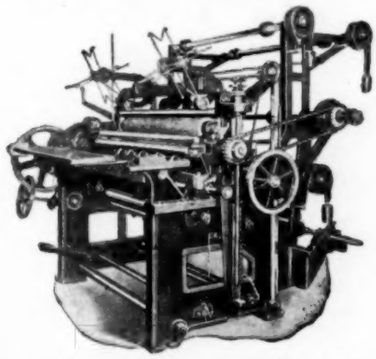
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Power Windups

The Hazards Associated with Windups in Rubber Factories are Not Numerous but Carelessness May Cause a Fatality

By William H. Larkin, Jr., M.E.

THE subject of power windups in rubber factories is not one which has had much discussion but is a topic that requires the speaker to draw largely from his own experience to describe the machinery in its home-made detail, to point out its crudities and to tell what has been done to make this class of equipment more nearly safe.

Power windups as a class of rubber mill machinery are not particularly hazardous. They usually operate at moderate speeds and lend themselves readily enough to safeguarding. It may be said with reasonable confidence that the only thing which can make them dangerous is the state of mind found when the operator is day dreaming.

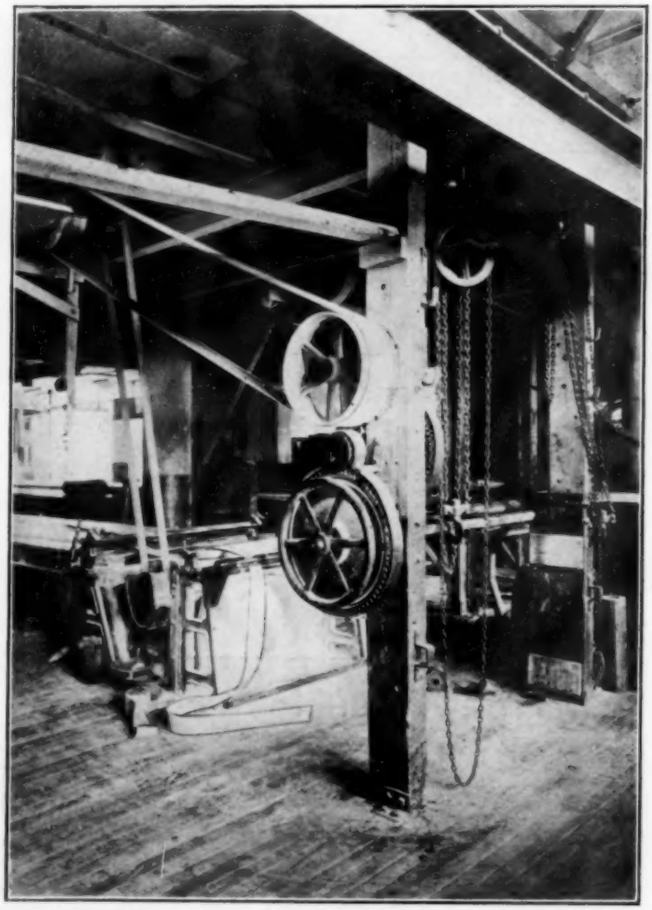
There are two principal classifications of windup machinery in rubber mills, those that are positively driven and those that are driven through friction clutches or members which allow for varying speed of the rotating parts and variable pull on the fabric being wound. The first class covers such apparatus as the windups at the ends of belt make-up tables, at the ends of belt vulcanizing presses, and those used with duck cutters and duck dryers. The second class covers windup equipment such as is found usually on rubber calendering machines.

Positively driven windups are commonly used and vary greatly in construction details, size and capacity. The windup on a duck dryer, for instance, may be a comparatively light piece of apparatus capable of reeling up one roll of duck as it passes over the steam drums, perhaps driven by a light belt from an overhead countershaft.

Quite a different thing is the windup at the end of a thirty foot belt press suited for rolling up a rubber covered belt six feet wide and about an inch thick, weighing twenty thousand pounds or so as it rests on the five inch square ox steel shell bar. The windups at the ends of belt make-up tables are usually like those at the end of presses in the case of the very large belts and on tables where the make-up on large special belts is partially hand work.

The Old Fashioned Windup

The old fashioned method of building this apparatus was to assemble a lot of large compounded gears, pinions, bearings and heavy shafts supported by wooden posts attached to the ceiling, and surrounded by a wooden fence. The ensemble was usually belt driven by means of tight and loose pulleys from overhead. The whole formed a noisy, cumbersome piece of apparatus which would wind up heavy belts if the drive belt did not slip too much, but one that was always giving trouble and which was in every one's way. The guarding usually consisted of the wooden fence mentioned which left much to be desired. The modern substitute for this old-fashioned scheme is to erect a set of steel I beams at a convenient distance from the make-up tables or vulcanizing press. To these vertical beams are attached pillow blocks which support the chucks or sockets which carry the shell bar. At one side, suitably placed, is a structural frame which supports a variable speed, series wound motor which drives the shell bar through worm and worm wheel, the latter of which centers on one of the chuck shafts. The I beam columns which make up the structure are ordinarily three in number. Two of them are located on the motor and worm wheel side while the third supports the chuck at the other end of the shell bar. Where the belt press has two openings, two such pieces of apparatus are located at the take off end of the press one behind and somewhat above the other. The control for this class of apparatus usually consists of the railway type drum controller which adapts itself to convenience of location and handling. In the case of a two opening belt press, for instance, the two windup drum controllers are ordinarily supported by a short vertical structure at the take off end of the press. This support is secured at the side of the press and is of a height that will bring the controller handles at about the height of the operator's waist line. Locating the controllers at this point allows the operator to see the platen mark on the belt as it comes along through and to stop its movement when it is sufficiently advanced. He also has in front of him the belt rolls on the windup shell bars and can watch them to see that they roll up properly. Such an arrangement of windup and control is much more compact and at the same time far more powerful than the old style pulley driven aggregation of spur gears. It is also more easily controlled and conveniently placed. One man was required formerly to watch the belt at the end of the press as it was withdrawn from the opening and another to handle the shifter lever of the windup. With the modern worm wheel drive one man handles both operations.

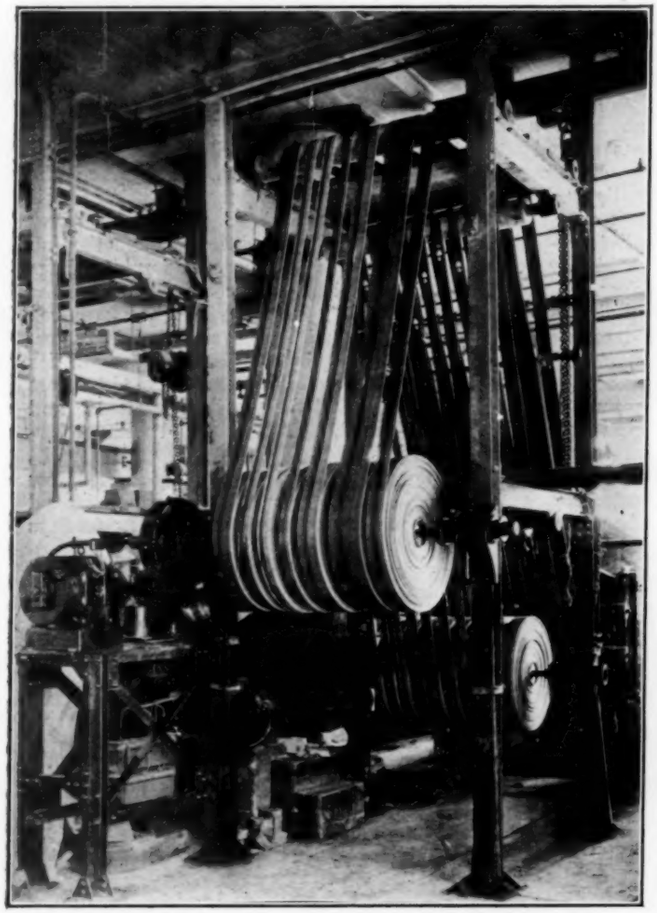


(Photo Courtesy of William H. Larkin, Jr.)

Old Power Windup at the Factory of the New York Belting & Packing Co., Passaic, N. J.

Delivered before the Rubber Section of the National Safety Council at its Fourteenth Annual Safety Congress, Cleveland, Sept. 28 to Oct. 2, 1925.

The other kind of windup or the variable speed calender type, familiar to all rubber mill men, is more or less standard in its general make-up. It consists, usually, of two stub shafts supported on the calender housings and each of which bears a socket clutch for an end of the shell bar. The stub shaft at the drive end is connected by a train of spur gears to one of the calender rolls—usually the bottom one. The end gear of his train is on a quill which is loose on the stub shaft and which also carries two friction discs one on either side of the gear. Two other discs are splined and keyed to the stub shaft in such a way that they match the discs attached to the moving gear and may be brought together and caused to grip the central discs. As the discs on the splines grip the discs on the moving end gear of the train the stub shaft begins to rotate and the windup operates. The contact surfaces between the discs are separated by oak tanned leather pieces which are cut to fit and which make good gripping surfaces. The sliding discs are made to come together and squeeze the moving discs attached to the gear train by means of a hand wheel which is held by a threaded hub on the bearing which supports the whole apparatus. As the hand wheel is turned the thread causes it to move sidewise, forces the discs together and starts them to rotate. Between hand wheel and rotating discs there is placed a ball bearing thrust collar —one of which is placed also between the outboard disc and limit collar at end of the shaft. As it is important that the hand wheel should not change its position too easily—its hub is split and supplied with an adjusting bolt which may be taken up as the threaded hub wears and the hand wheel becomes somewhat loose. With the adjustment of the hand wheel the speed of the windup and the tension on the fabric can be varied. This form of apparatus may be used on other types of rubber mill machinery but the greatest number will be found in the calender room.



(Photo Courtesy of William H. Larkin, Jr.)

The New Power Windup in Use at the Passaic, N. J., Factory of the New York Belting & Packing Co.

A walk through one rubber mill recently disclosed the following assortment of windups which probably is more or less what would be found in many factories.

Six two-opening presses with modern double worm and worm wheel motor driven windups with heavy structural steel supports.

Four single worm and worm wheel windups.

Two old type belt driven windups on soapstoning machines, with leather band friction drums for adjusting the tension.

Seven old fashioned belt driven windups on belt making tables, to handle the belts in process and linings.

Two duck cutters with chain driven windups.

Three old style belt driven windups with disc tension.

One belt driven windup at end of duck cleaning machine. Tension from the weight of the goods.

One old style belt driven windup on duck dryer. Tension from friction of goods over the rolls and drums.

Eighteen calenders with windups geared from bottom roll, and with adjustable band friction tensions.

Four special belt driven windups for use with calenders.

One belt driven windup used to pull packing through branding machine. Has a band friction tension.

Two belt driven windups with band brake tensions at end of packing make-up table.

Three belt driven windups without tensions, on soapstone apparatus.

Seven belt driven windups with gear reductions on end of dryers.

These windups have great similarity except as to size and driving power and the previous detailed descriptions answer for them very well.

The Worm Wheel Windup

It is, of course, evident that the modern motor worm wheel driven windup is far superior to the old rickety compound geared belt driven winches which formerly served the purpose in all cases and still do in the majority of cases. The worm wheel apparatus lends itself readily to safeguarding, costs less to maintain, consumes less power, is cleaner in that the lubricating oil is confined to cast iron casings rather than generously spread around the floor, and finally it is important to note that they take up much less room as a general thing—giving the workman more space to move around in and fewer things to bump into. Where the old style belt driven geared winches are in use as windups they should be safeguarded carefully. In the first place they should be fenced in so that no passerby will get clothing or body caught in gears, shafts or belt. Next the gears themselves should be covered with sheet metal or heavy screen in such a way that a man backing away from the press with shell bar in his hands can not inadvertently pass it between the spokes or a moving gear with disastrous results. The vertical belt which comes down from the counter-shaft overhead should be enclosed to a line six feet above the floor. The horizontal belt from the counter-shaft to the line shaft should have a standard guard or trough under it. The whole guard should be substantially made so that it will not be wrecked the first time a heavy belt rolls against it. The description of this particular guard makes it opportune to make certain general remarks about guards of the same nature. Two of the great requisites for the value and permanence of such a guard are the possibility of easy access for the oiler and equally important is the construction of the guard in such a way that the millwright can remove it entirely, when repairs are to be made, without too much labor or handling too many small parts. Unless a guard of this sort has the above two characteristics, its life on the job will be short and the repair man invariably will express his opinion of it with an axe.

The safeguarding of belt make-up tables through the application of modern apparatus such as motor drives for windups and remote control quick stop and start push buttons is necessary as the old belt shifter for starting and stopping the fabric left much to be desired. When the man's finger was caught in the squeeze rolls, under the guide bar or at the folding blade, it was too long a jump for the stripper in the middle of a fifty foot table. With push buttons spaced every ten feet the control is instant and effective.

A new attachment has recently been gotten out for duck

cutters in the nature of a steering device. As the fabric passes over the machine across the knife bar it is ordinarily cut into many strips. Care is used to waste as little as possible along the edge. As it is rather difficult to make the duck from the let-off end of the machine travel in an exact straight line past the knife bar and toward the windup end, it is necessary for the workman to pull at the edge of the fabric frequently in order to guide it and prevent unnecessary waste. This pulling operation is not altogether safe, as a careless man is likely to get his hands too near the knife bar and lose a finger or two. To make the cutting operation more certain and accurate, the windup apparatus on the duck cutter is provided with a steering device which is usually placed at the let-off end. Such a device is arranged so that a lever or hand wheel will shift the shell bar sidewise and allow the adjustment of the fabric without making it necessary to pull the edge with the hands.

Socket Chuck Should Have Attention

The socket chuck which holds the end of the shell bar should have attention, especially the one with the sliding lock ring which holds the bar in place as it rotates. The edges of the slot often become worn sharp and are dangerous for that reason. It is not uncommon to find projecting set screws in the ring. These were at one time replaced by gib style set screws with countersunk heads but the little blued hexagonal wrench with the bent end was the difficulty, a rough neck from the Tartar Steppes could scarcely see so small an object to say nothing about finding it the third time he wanted it. Again it is traditional in most factories today that everything not tied down gravitates to the pawn shop. So the old set screw came back. For holding this sliding ring on windup socket clutches, many factories have adopted a spring lock or pin which is set in a drilled hole in the clutch and located so as to hold the ring in place. This lock pin is about five sixteenths of an inch in diameter and projects from the metal surface about one quarter inch. It is rounded slightly at the top and can be depressed easily by the workman's finger. A small spring in the drilled hole causes it to jump back readily when it is released.

Friction windups on calenders were at one time quite commonly provided with a hand wheel for the adjustment of the friction parts which rotated with the shell bar and stub shafts. This required that it be turned in the direction of the rotation when it was desired to loosen it or let it off entirely. As the pull of the goods tended to tighten the friction, as it rotated, it was sometimes difficult to loosen it or stop the motion in a hurry. In such cases pounding with a bar was considered a suitable remedy. The fact that this style of friction could not be let off quickly and with certainty at all times made it an unsatisfactory piece of equipment from the safety standpoint. Modern calenders are provided now with friction windups of the style described some paragraphs back which are operated by means of stationary hand wheels threaded on to the hub of the supporting bracket.

Some Windup Accidents That Have Occurred

Windup accidents have not been numerous or particularly noteworthy—nevertheless there are plenty of possibilities. Perhaps the belt making department has accounted for the most serious accidents that have occurred. Quite recently a man was guiding a heavy belt as it was being pulled through the press and rolled up by the windup. Evidently he got thinking of the friend he was to meet at five because he suddenly allowed his hand to wander in between the straight part and the roll. Found it impossible to withdraw hand and was carried around the shell bar several times before his yells induced the other press men to stop the windup. Luckily the belt roll was not full width or he probably would not be here now. As a matter of interest, it might be suggested that the pressure between the layers of a roll of belting or fabric is far greater than most people imagine. If the internal pressure of a cylinder puts a hoop tension on the shell proportional to the pressure multiplied by the radius so conversely, the pressure can be estimated when we know either the tangential or hoop tension.

This can be fairly easily figured from the hoop tension formula. In the case of a sixty inch belt dragging through a thirty foot press, about fifty feet long from windup to further stretcher clamps, hanging in a long arc between the decks, a little study with a strain diagram will show a tension of well up to eighteen thousand pounds, a tension per square inch of cross section of perhaps three hundred pounds and a pressure between the successive layers of belt of from ten to twenty pounds per square inch. With ten pounds per square inch on a thirty square inch hand there is but little chance of the operator freeing himself.

Shell Bar is Often Too Small

Another disconcerting thing that the safety man frequently sees in the belt room is a hevy belt on a far too small shell bar which is being deflected beyond the safe limit. It may break any minute as the windup rotates and the stresses reverse themselves. Conveyor belt rolls approaching six feet wide nine feet in diameter and weighing well up to twenty thousand pounds are not unknown. Figuring the size of shell bar required to carry it between supports six feet apart calls for a 5¾″ piece of square steel where the usual factor of safety of ten is used for parts subject to a reversal of strains. The largest bar any one ever saw in a belt room, in all probability, was a piece of four inch square stock reduced in size at the ends to fit into the chucks and whose sag under such a load is anywhere from an eighth to a quarter of an inch, making it difficult and not entirely safe handling in and out of the windup sockets. Unfortunately such matters as strength of beams, bearing capacity of floors and factors of safety have very little consideration from the usual factory man. For that reason the belt making department with its powerful windups and heavy loads is most likely to run into trouble from this cause.

Tribulations of One Factory

One rubber mill not long since took an order for a large conveyor belt. The belt department building is a one story affair without basement located over what was once marsh land. The whole process was a revelation to the people in the department of the things that a huge concentrated weight can do to ordinary equipment. In the first place the shell bars sagged like bows, could not be handled in and out of the chucks. Next the chain falls broke. Then when the partly completed belt was placed on a truck, truck and all sank down through the floor with loud cracks and many splinters:—only that a girder happened to be there the job would have created great mortality among the rubber bugs below. Before the finished belt could be moved out of the building on the way to the shipping department, it required a trestle under the floor and full length of the press room. There were no serious accidents, luckily, but the possibilities were great. It is greatly to be hoped that some day most of the belt making factories will be provided with safe and suitable buildings—high posted, well lighted and with powerful traveling cranes overhead to shift the heavy belt rolls, instead of the usual comparatively unsafe, poorly lighted, low posted rooms in which the handling is done by sweating hand labor assisted by inadequate chain falls and a few trolleys and tracks on the ceiling.

The majority of belt rooms handle their belt rolls in and out of the windups by means of chain falls with suitable bridles, terminating in hooks which are wrapped around the shell bar at either side of the belt roll when the occasion requires. These chain falls hang from cross beams overhead often supported by chain slings which may have one or more wraps around the beams and which are secured by means of ordinary shackles. These slings bear the weight of the heavy falls and the heavier belt roll at times. They are frequently overstrained and possibly become worn in the links. Some day one snaps without warning under the strain of a heavy belt and another case is ready for the hospital. It is no light matter for a man to receive a five ton triplex on the top of his head when he is busy figuring out who will win the game next Saturday afternoon. This has happened often enough to make the use of wire rope slings required by the insurance companies. These are given a few generous wraps about the overhead beam and fastened with a couple of Crosby clips. The advantage of the wire rope is that it is frank and above board. If it is overstressed the wires begin to fray—

soon a whole strand snaps and the condition is evident to very casual inspection long before it becomes dangerous.

The other day in one belt room, a large foreign chap was easing off the end of a large belt at the left end of the press. The belt was passing smoothly through the stretcher clamps as the powerful windup reeled it in. As the tail end of the belt came away from the let off shell bar the workman put his forefinger through a hole which had been punched in the belt end and, leaning against the pull of the belt, was keeping it away from the floor as it drew near the stretcher. Meantime the man projected his astral body far away into pleasanter regions. The belt continued to roll in, however, and when the man awoke he found that his finger has been sheared off by the belt as it passed through the slightly open stretcher clamp.

Some Definite Rules and Recommendations

There are a few recommendations that can be made in connection with power windups which may well appear at this point.

The pulling and handling of fabrics being wound up, with the hand near the bite is dangerous and should not be allowed.

The old fashioned compounded gear and pinion, belt driven windup should be superseded as far as possible by the modern electric driven worm wheel windup which is capable of remote control, quick stop and adequate guarding.

Belt press windups particularly should be provided with the modern electric driven worm wheel windups and drum type controllers placed at the side of the press at the windup end and conveniently arranged so the man who handles them can both see the edge of the platen and the belt rolls as they roll up on the shell bar.

Belt making tables with powerful windups especially with end squeeze rolls should be provided with electric drives, remote control and push button stops about every ten feet of length.

Where a man is stationed at a belt windup to straighten and guide a number of belt rolls on the shell bar, he should always have another man within call in case of trouble who can promptly stop the motion of the windup.

Windups on calenders should be preferably of the stationary hand wheel type.

Calender windup friction should be kept as free from oil and grease as possible. The leathers should be replaced when they become oil soaked.

Slings for belt room chain falls which are used for handling belt rolls in and out of windups and let-offs should be made of wire rope fastened with not less than two Crosby wire rope clips, and given not less than four complete wraps around the overhead supporting beam.

Shell bars for windups should be of ample diameter to be safe for the maximum loads they are to carry with a factor of safety of at least seven. They should be calculated so that the approximate maximum deflection will not be more than one tenth of one per cent of the length of the shell bar in inches in case of the largest bars to two-tenths of one per cent in case of the smaller bars.

The sliding ring on the windup socket chuck should be secured against movement by means of the spring lock set into the metal rather than by means of the old fashioned set screw.

Press men should be warned against using belt windups as stretchers. A powerful windup apparatus on a long vertical column may be capable of pulling the whole structure down on the workmen long before the belt has received any noticeable stretch. The regular hydraulic stretchers and clamps should be used for this job.

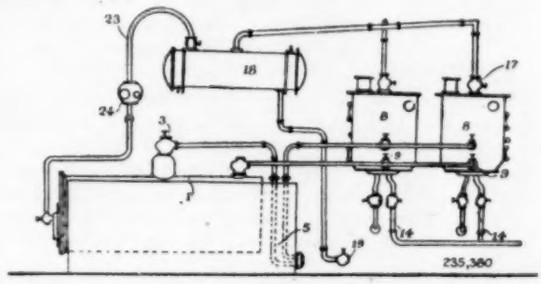
In conclusion it might be said that the windup in rubber factories is so placed and of such a character that it is usually found in the midst of heavy and laborious work, supporting extraordinary loads and furnishing much concentrated crude power. Its motion is slow and there is no tendency to lash out unexpectedly to find a victim, but unfortunate is he who carelessly falls asleep in its path. Boyd Fisher in his book on "Mental Causes of Accidents" points out the thing that is the greatest danger in this corner of the factory, namely, "the unguarded mind." He appropriately states that, "the best safety device is the safe man." The unguarded state of mind may be brought about by youthfulness and inexperience.

TECHNICAL ABSTRACTS

Crude Dipentene from Crude Rubber

British Patent No. 235,380

The crude rubber employed in the process is the scrap and waste of the rubber estate. The rubber is disintegrated and heated in a still to a temperature of approximately 300 degrees C under a slight excess of pressure. Dipentene is obtained and is subsequently condensed at a pressure which is slightly less than atmosphere. The pressure is regulated in such a manner that from forty to forty-five per cent of the crude dipentene and from 5 to 10 per cent of the uncondensed gases are obtained. If the heating is stopped when a residue of about 25 per cent is left, the residue is a liquid rubber of high viscosity, while if a residue of 50 per cent is left, it is of low viscosity.



A boiler 1, which is seen in the accompanying figure, is provided with a regulating valve 3, and supplies steam through a superheater 5 where it is heated to a temperature of 350 to 400 degrees C. The steam finally enters the pair of stills 8. Steam traps 9 return the condensed steam from the jackets to the boiler. A regulating valve 17 controls the pressure in the still, and the gases pass to a condenser 18, the crude dipentene being drawn off through a valve 19. The uncondensed gases pass through a pipe 23 to an exhauster 24, and thence to the boiler furnace. The liquid rubber is drawn off through pipes 14. A modified type of still is described which is directly heated in a furnace. The liquid rubber is a substitute for linseed oil and other drying oils.

* * *

Coagulation of Latex

***Rev. Gen. des Colloides*, Vol. 2, pages 321-28, 353-61**

Microscopical examinations were made to determine in an exact manner the relation between agglutination and coagulation. The latter is represented as the last stage of the aggluntination process. The mechanical properties of the finished rubber are explained with a great deal of uncertainty from the character of the structure of the coagulate. Furthermore in the coagulation of rubber the number of particles and the different ways in which the coagulating reagent act on the particles of rubber in the latex play important roles. The surface tension of the rubber latex changes as the process progresses.

* * *

Dipped Rubber Goods

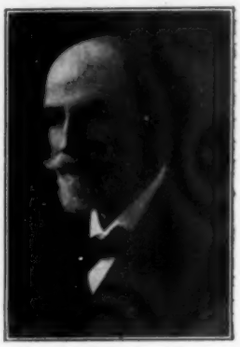
British Patent No. 233,458

Latex which by evaporation has been concentrated to a rubber content of 60 to 70 per cent is used for the manufacture of "dipped" goods. The presence of preservatives and previous dialysis of the latex do not interfere with the process. The form is covered with a film of the correct thickness by repeated dipping and drying operations. Vulcanization may be effected by the external application of sulphur chloride or by heating with sulphur and an accelerator which may be mixed with the latex before the dipping operation or introduced subsequently into the dried films by diffusion.

VULCANIZATION & ACCELERATORS

By Andre Dubosc

PART II (*CONTINUED*)



Natural and Mineral Accelerators

Speed of Vulcanization is Determined by Modification in Rubber Molecule After Coagulation—The Fact that this Change, which is Progressive, May be Stopped by Formol, Suggests the Action of an Anoerobic Bacillus

THE field was then opened up and the investigations and researches on the influence of protein matters and their decomposition products on vulcanization were undertaken and continued.

The removal of the natural protein matter contained in the gums, Ceara and Rambong showed that these rubbers behaved in the same manner as Hevea rubber in the vulcanization process. The removal of the protein matter had the effect of reducing the proportion of sulphur combined with the rubber molecule, for when protein matter was added to the rubber mix the percentage of combined sulphur was immediately increased.

Conclusions Derived

To sum up, the conclusions arrived at by Beadle, Stevens and Baritt were sensibly the same as those which were obtained by Spence, in that they attributed to the protein matters contained in the rubber a certain influence on the vulcanizing process. This Spence attributed to the accelerators.

These conclusions were then confirmed by the work done on this subject by Gaspari as well as by the experiments which were carried out in 1912 by Esch, and thereafter by Arndt. These investigations consisted of adding to the rubber mix a mixture of albumin and lime which had been rendered insoluble by treatment with tannin. According to these rubber chemists, this mixture was able to confer on the rubber the same vulcanizing properties as the natural proteins that are found associated with the rubber mass in the latex.

The experiments carried out with the aid of peptones by Stevens gave results which were superior to those obtained with albumin mixtures. But nevertheless these results were not as good as those obtained when rubber, containing its natural proteins, was vulcanized.

Eaton, Grantham and Day, chemists connected with the laboratory of the Department of Agriculture of the Federated Malay States, whose painstaking and comprehensive studies on the technology of the preparation of rubber on the plantations are well known and have gone far in developing this industry, also occupied themselves with this question, that is with the effect proteins have on the vulcanization of rubber. The work they did on the effect of protein matters and of the products derived from proteins, under the double action of bacteria and enzymes is of the greatest interest.

Ripening of Rubber

In fact they discovered the ripening or maturing of rubber gums, a process which gives a very lively rubber and one that is possessed of physical characteristics which are much superior to those found in the ordinary quality of rubber made on the plantations.

In the first report that they made on this interesting subject, Eaton and Grantham indicated that they realized that the differences that exist in the way in which various plantation rubber facts during vulcanization are to be attributed to the accelerating action of a small quantity of certain peculiar substances that are found in the rubber latex and that are probably constituted of protein matter or derivatives thereof.

New Experiments Made

A series of new experiments were then undertaken by these investigators with the view in mind of determining the exact character of this substance which possessed the power of increasing the rate at which rubber was vulcanized and also of establishing the character of the various reactions into which they entered and how they varied under various conditions, so as to determine the probable constitution of these vulcanization accelerators.

During the course of these experiments they were able to isolate and prepare different substances derived from rubber latex to which they were able to attribute the acceleration of vulcanization. They were also able to conclude with certainty that after the formation of the coagulant, when the rubber latex was treated with various coagulating agents, there remained in the rubber serum another substance which possessed the same vulcanization accelerating power.

Experiments of Eaton and Grantham

In many of the experiments which Eaton and Grantham made on this subject, they employed a crude rubber which came in the form of slightly pressed sheets where the coagulants contained large amounts of the serum. The rubber gum was coagulated in the usual manner; then it was allowed to remain in contact with the serum for a certain length of time, so that it became impregnated with the serum, and then the rubber was pressed on a slab by means of a roller.

With the idea of proving that the differences obtained in vulcanization were not in any way due to the manner in which the rubber latex was treated in their laboratory, Eaton and Grantham repeated their tests using in this case rubbers which had been coagulated in various ways on different plantations. These results that were obtained in this case were the same as those originally obtained.

The investigators divided their experiments into three separate parts.

The first part consisted of a series of experiments which had for their purpose the determination of the following:

1. The effect that antiseptics had on the rubber when used both hot and cold.

2. The effect that formol had on the rubber.

3. The effect that washing with running water had on the rubber molecule.

4. The time required to incorporate with the rubber sheet the substance which caused the change to take place in the manner in which it vulcanizes.

The following conclusions were then drawn:

1. The speed at which vulcanization ensues for the case of any given latex is determined by the modification induced in the rubber molecule after coagulation.

2. This change is produced during the first few days after coagulation takes place. It is progressive and attains a maximum for the rubber sheet which contains a large proportion of serum, approximately at the end of six days.

3. This change may be stopped either completely or in part by the action of formol, employed either in the hot or in the cold. It is also stopped if the rubber is creped immediately after coagulation ensues. This action is due to the fact that larger surfaces are exposed to the action of air by creping, with the result that dessication is more rapid. It is then possible to deduct from this fact that during the passage of the rubber between the mixing rolls, the gum is deprived of the greatest part of its content of serum.

4. The complete stopping or the impossibility of any change taking place in the rubber molecule, which is brought about by the action of formol or other antiseptics, when used either in the hot or in the cold, indicates that the substance which has the property of augmenting the speed of vulcanization is formed by a biological process. This action is probably due to an anoerobic bacillus, for it has not been demonstrated that any change is caused by a chemical agent.

The tests were then made with rubber gums which had been chilled down to a temperature of minus 10 degrees C and the results obtained in this manner were very interesting indeed. The rubber treated in this manner did not vulcanize any more quickly, even, if after the rubber has been chilled, the temperature is decreased to approximately 30 degrees C and allowed to remain at that point for a certain length of time.

The Second Part

The experiments which are included in this part have for their purpose the study of the various substances contained in the latex, the various modifications of these ingredients found in the raw rubber, and thereafter the investigation of the character of substances which have the power of modifying the speed at which various kinds of rubbers add different mixtures of rubber vulcanize.

There was also included the study of the different protein matters found in the raw rubber and the additive action that they exert on the rubber and the vulcanizing process. The study accordingly included the following:

1. The effect of caseins and peptones on the vulcanizing process.

2. The action of a decomposed casein on the process.

3. The action of the protein matter extracted from the latex on vulcanization and also on the properties of the vulcanized rubber.

4. The action of the protein matters found in the evaporated serum of vulcanization.

5. The action of the substances obtained by decomposing the protein matters included in the serum on the vulcanizing process.

Two Substances in the Serum

One of the results of these experiments was the discovery of two different substances in the rubber latex serum.

1. In the first place there is present in the serum a substance with properties and characteristics of the proteins, which is precipitated or coagulated by heat. As far as its effect on the course of the vulcanizing process is concerned, it was found to possess no action until after it had been decomposed.

2. Then there was found to exist in the rubber serum a substance which is soluble in water, and which can be isolated from the serum only by evaporation. Furthermore this substance can be decomposed only with great difficulty. It also possesses an accelerating action on vulcanization.

The products obtained by decomposition of the protein matters are more active accelerators than the residue secured by evaporation of the rubber serum, after having first removed the coagulable proteins contained in the serum by heating.

In the process customarily employed in the preparation of crepe and sheet rubber the greatest part of the serum and its ingredients are removed from the rubber by washing. The result then is naturally that all the soluble products, contained in the serum, are lost and acceleration which can be brought about by these substances is not taken advantage of at all.

The experiments given in the first part have all shown that the gradual development of the accelerator takes place within a period of the first six days after coagulation. It is possible to attribute this fact to the gradual decomposition which the proteins precipitated with the rubber during the coagulation of the rubber latex undergo.

The Third Part

The difference between the high proportion of nitrogen in a substance, which has the power of exerting a slow action on the vulcanizing process, and the low content of nitrogen in other substances which possess the power of rapidly accelerating vulcanization can only be explained by the fact that in the second case the protein matters undergo decomposition. The soluble part of the decomposition products is removed from the crepe rubber during the washing operations, but the insoluble residue which remains behind and which is in reality the real accelerator undergoes bacterial decomposition.

In referring to the results obtained in the first and second parts of their investigations, Faton and Frantham determined the nitrogen content of a large number of their samples. At the same time they determined, with the aid of the graphical method developed by Schidrowitz, the most favorable duration of the vulcanizing process. The results obtained are given below:

Percentage of nitrogen in the dry rubber	Best time of vulcanization in hours
0.31	2 hours 45 minutes
0.26	1 hour 30 minutes
0.19	1 hour 15 minutes
0.16	1 hour 15 minutes
0.17	1 hour 15 minutes
0.13	1 hour 15 minutes
0.18	1 hour 15 minutes
0.33	2 hours 30 minutes
0.36	3 hours 30 minutes
0.38	3 hours 30 minutes
0.37	2 hours 45 minutes
0.20	1 hour 15 minutes
0.19	1 hour
0.24	1 hour
0.20	1 hour
0.40	3 hours 15 minutes
0.39	3 hours 15 minutes

Discussion of Results

In almost all the cases the percentage of nitrogen in the rubbers that vulcanize at a slow rate of speed is from forty to fifty per cent greater than the proportion of nitrogen in those rubbers which vulcanize at a high rate of speed. The percentage of nitrogen was determined in all the rubber samples after they had first been creped and then dried.

On the other hand, it was found that the nitrogen content of samples, prepared by the evaporation of thin layers of latex, or in those which had been prepared by converting the rubber latex into thin sheets after coagulation, was in the neighborhood of half a per cent. Then again other samples were found to vulcanize rather rapidly, although the percentage of nitrogen contained in them, as determined by analysis, indicates that decomposition of the protein matters has not yet taken place. In this case it would appear as if the reagent that brings about acceleration is an unknown substance found when rubber latex serum is evaporated, after the protein matters contained in the rubber are removed by coagulation.

Conclusions

The following conclusions have been derived from the experiments that Eaton and Grantham made on this interesting subject:

1. The experiments described in the first part of this investigation and the results obtained indicate that there exists in the rubber a certain substance to whose influence there must be assigned the variations that take place in the speed of the vulcanizing process when carried out on plantation rubbers. This substance is formed within a period of six days after coagulation and its formation is progressive in character. After this period has elapsed its further formation ends.

(Continued in Next Issue)

EDITOR'S REVIEW DESK

Books **Trade Catalogs** **Articles**

THE MANUFACTURE OF RUBBER FOOTWEAR. 40 pp. 8¼" x 11". La Crosse Rubber Mills Co., La Crosse, Wis.

This is one of the most attractive catalogs it has ever been our pleasure to read, and in our opinion, should do much to stimulate the sale of La Crosse footwear, inasmuch as a company which will go to such pains in compiling literature, would not be content to allow any product bearing its trademark to suffer by comparison.

The interesting story of the manufacture of rubber footwear is told in narrative style, beginning with the Indian moccasin, moving to the discovery of rubber in Brazil and closing with an account of the many steps involved in manufacturing and a short history of the La Crosse company. The catlog is profusely illustrated with many fine halftones of processes, plants, offices and executive staff. A few of the styles of rubber footwear manufactured by the company are also illustrated in the back of the booklet

The La Crosse Rubber Mills Co., which was organized in 1897, has a capacity of 40,000 pairs of footwear a day and employs between 1,200 and 1,500 persons. With the further plant development now being planned, it is said that it will soon require between 1,800 and 2,000 emplyees.

* * *

ADJUSTMENT OF $_{H}$ OF CULTURE MEDIA UNDER STERILE CONDITIONS. By Leo M. Christensen and Ellis I. Fulmer, Iowa State College, Ames, Ia. Published in *Industrial & Engineering Chemistry* for September.

This article is accompanied by a drawing of the apparatus for adjusting the hydrogenion concentration of culture media. It admits of ready sterilization and allows sterile conditions to be maintained during the adjustment. The height may be adjusted to the size of the autoclave by using a small buret or by lowering the buret. Although Pyrex glass construction is preferable for the entire apparatus, it is not necessary. The shield, however, must be of Pyrex glass. Three pieces of apparatus must be set up for $_{H}$ adjustment, one for acid, one for alkali and one for water.

* * *

HARVARD BUSINESS REPORTS. Volume I of a series. 561 pp. 6" x 9". Bound in Library Buckram. Compiled by The Graduate School Business Administration, George F. Baker Foundation, Harvard University, Published by A. W. Shaw Co., Chicago. Net $7.50.

Twenty-five years ago it would have been presumptuous to speak of business as a science. Yet today business can qualify as a science under each of the specifications which President Coolidge sets up. First, assembling facts. Educational institutions, private individuals, and trade associations—all are gathering facts about business. Second, comparison. The *Harvard Business Reports* reports cases in much the same way that legal decisions are recorded. Third, interpretation. The "case system," long established for teaching law, has been applied to business instruction. Therefore, today there is a science of business—and devoted to the extension and practice of that science, the profession of business.

It is the aim of these Reports to build up, as time goes on, a volume of recorded business precedents, similar to the cases in law, which will be readily accessible for business executives. As is well known, law cases are reported as they occur, with no effort at anything but a chronological arrangement. The ability to coordinate new cases with cases decided in the past and to fit the conclusions of the court into legal theory is gained through elaborate indexes and digests. Something corresponding to these court reports and their digests is needed in business, and it is the intention of the Harvard Business School to provide careful cross-indexes of these cases in order to facilitate their use for reference purposes.

In this the first volume of a series are published 149 cases selected from over 3,500 cases collected by the Harvard Graduate School of Business Administration through its Bureau of Business Research. Each case has particular importance as an example of current business practice or as a guide to sound business management. The decision stated in each case is that of the business firm; in no instance has the Harvard Business School injected its own editorial opinion.

Each case presents an actual situation, which arose in an actual business, the actual method by which the situation was met, and the actual reasons which inspired its selection. Concise headnotes at the beginning of each case briefly summarize the facts and indicate the executive decision therein. This series of cases presents a chronicle of precedents which will serve as a stimulus for more thoughtful business management, but it is essential to keep in mind that they should be considered as suggestive only—they do not attempt to set up rules, arbitrary admonitions to do this and not to do that, commercial prescriptions alleged to assure success if taken in liberal doses.

* * *

RUBBER INDUSTRY AND TRADE OF JAPAN. By C. R. Cameron, American Consul, Tokyo. Issued by the Rubber Division, Department of Commerce.

Fifth in order of importance in the rubber manufacturing industry, Japan controls 307,500 acres of rubber land, of which 120,700 acres were planted and 63,300 acres producing in June, 1924. This acreage is capable of producing 9,000 long tons of rubber yearly, or about half the Japanese requirements. Tariff protection measures, enacted in 1911, have aided Japan's rubber industry, as also did the cessation of imports from other rubber manufacturing countries during the war. Tires, footwear, rubber toys and specialties are the principal articles of rubber manufacture. The "tabi," the coolie rubber-soled shoe, and the rickshaw tire are designed especially for Oriental use.

Japan imports a large quantity of automobile tires, waterproof rubber footwear and mechanical rubber goods from the United States and Canada, her exports being wholly to far eastern markets.

* * *

THE JOB BLUE-PRINT. Personnel Leaflet No. 5. Policyholders' Service Bureau, Metropolitan Life Insurance Co., New York.

How several companies establish specifications for every job in their organization is described in this leaflet just issued. These specifications cover titles, duties, working conditions, qualifications necessary and lines of promotion. Job blueprints are said to assist the employment manager to select applicants, furnish a basis for rates of pay, establish definite lines of promotion, help to measure the efficiency of each employee and facilitate improvements of operations and processes. Among the companies using job blue-prints is the Goodyear Tire & Rubber Co., Akron. A copy of the leaflet may be obtained without obligation by writing to the Policyholders' Service Bureau.

* * *

FOXBORO INDICATING THERMOMETERS. Bulletin No. 148. 36 pp. 8" x 10½". The Foxboro Co., Inc., Foxboro, Mass.

Foxboro dial-type indicating thermometers have been used in many industries for fourteen years and in this latest bulletin the entire line manufactured by the company is described and fully illustrated. A full price list is appended.

The Market Place

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THE MARKET PLACE Section Continued on Second Page Following.

MARKETS

Cottons and Fabrics

NEW YORK, Oct. 1, 1925

As indicated from the action of the market following the publication of the Government Mid-September crop report, in considering the price of cotton, the question of supply is of considerably more importance than that of demand. Condition was estimated as 53.8 per cent of normal, forecasting a yield of 13,931,000 bales. Not least among arguments put forward by those who believe that lower prices must inevitably result from a production of 14,000,000 bales is that last season's increased demand did not actually represent the world's present consuming capacity but resulted from the replenishment of stocks following the more abundant supplies of raw materials and finished goods at prices lower than those prevailing in the two previous seasons. The assumption is that during the present season the demand will decrease, but proof of this is lacking.

The activity of the into sight movement during the past two weeks reflected an unusually active demand for spots, sales in the southern markets having been on a scale unequaled at this time in former years. This demand was accompanied by the making of extensive forward commitments, German, Japanese and southern mill interests having been the best buyers.

Conditions in the cotton goods markets continue to improve, an important result being that a large number of mills which previously have had no incentive to fix the price of cotton brought on basis are now taking every favorable opportunity of doing so. Domestic consumption, which, during the month of August showed an increase of 22 per cent over the same month last year, is steadily increasing with no evidence of accumulation of stocks.

European advices, although not uniformly favorable, are such as to inspire optimism. Manchester, despite agitation in some quarters for further curtailment of production, reports a considerable improvement in the outlook and an increasing volume of sales. The German textile industry is stated to be adversely affected by labor troubles, high production costs and credit difficulties. Notwithstanding these unfavorable factors and the keen competition furnished by English and Czechoslovakian manufacturers, American cotton is steadily increasing in demand, exports to Germany being 100,000 bales more than at this time last year.

New York Prices

	Open	High	Low	Close	Close Sept. 15
October	23.07	23.18	22.91	23.18	24.03
December	23.19	23.37	23.04	23.37	24.46
January	22.35	22.64	22.25	22.64	23.72
March	22.60	22.88	22.54	22.88	24.09
May	22.83	23.10	22.75	23.10	24.33

TIRE FABRICS

Manufacturers have begun to curtail tire production. Since the object has been to dispense with spring dating, production pressure is likely to await spring developments. As a result the market for tire fabrics was considerably restricted during the past two weeks. A number of small orders were placed for delivery during the last quarter. Fabric mills are caught up in deliveries on older contracts and a number seemed ready to name close prices on new inquiries. Some business has been placed in the last few days, contracts running into June, 1926. There is a reported scarcity of spot and nearby supplies which are firmer in price.

CORD FABRICS

Combed Sakellarides		Nominal		
Combed Peeler	lb.	Nominal		
Carded Peeler		.51	@	.52
Combed Egyptian uppers	lb.	.67	@	.72
Carded Egyptian uppers	lb.	.62	@	.65

SQUARE WOVEN

17¼-ounce Egyptian uppers, combed	lb.	Nominal		
17¼-ounce Egyptian uppers, carded	lb.	.58	@	.63
17¼-ounce Sakellarides, combed	lb.	Nominal		
17¼-ounce Peeler, carded	lb.	.48	@	.50

Ducks—Demand for cotton duck during the past two weeks has not been more than fair. Advances in quotations have occasioned some deferment in purchases. Buyers are following a conservative program and are therefore disposed to purchase nearer the time of actual necessity. Mills are said to be fairly well booked with orders up to the close of this year.

Burlaps—Heavy weight burlaps are now priced above the record levels of the past five years, and lights are approximately at the peak for a similar period. This did not occasion any change of heart among local traders who felt that values would continue to rise. A leading operator stated that he counted upon a further rise of 10 per cent in burlap prices occasioned by an advance in the cost of jute. A number of factors, who previously were half-hearted regarding the advancing market, have become very bullish.

SHEETINGS

40-inch	2.50-yard	yd.	.15¼	@	—
40-inch	2.85-yard	yd.	.13¼	@	—
40-inch	3.15-yard	yd.	.14¼	@	—
40-inch	3.60-yard	yd.	.11⅜	@	.12
40-inch	3.75-yard	yd.	.11¼	@	.11½
40-inch	4.25-yard	yd.	.09½	@	—

DUCKS

Belting	lb.	.42	@	.44½
Hose	lb.	.42	@	.42½
Enameling	lb.	.44	@	.47
Shoe Ducks	lb.	.50	@	.52
Single filling	lb.	.19	@	.21½
Double filling	lb.	.22½	@	.23½

BURLAPS

(Carload Lots)

7½-ounce 40-inch	8.60	@	8.65	
8 -ounce 40-inch	8.75	@	8.90	
10 -ounce 40-inch	11.50	@	—	
10½-ounce 40-inch	11.90	@	—	

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STRIP CUTTING MACHINES
For cutting all rubber, composition and plain or impregnated fabrics.
Cameron Machine Co.
61 Poplar St., Brooklyn, N. Y.

SULPHUR—*"Tire"* Brand Superfine; *"Tube"* Brand Velvet; quality Sulphur for the rubber trade.
Stauffer Chemical Co.,
of Texas.
Scanlon Bldg. Houston, Texas
San Francisco, Cal. Chauncey, N. Y.

TAR—PINE, RETORT, KILN
All grades for the rubber manufacturer.
Pensacola Tar and Turpentine Co.
Gull Point, Florida

TECHNOLOGIST — Testing, formulae, costs, litigation, experimental work on all classes of rubber products.
Fred'k. J. Maywald, F.C.S.
5 William St., Belleville, N. J.

THERMOMETERS—Recording, controlling temperature and pressure controllers.
American Schaeffer & Budenberg Corp.
Berry & South Fifth Sts., Brooklyn

TIRE BUILDING EQUIPMENT
MOLDS & CORES
The Akron Rubber Mold & Machine Co.
Akron, Ohio

TRIMMERS—OVERFLOW
For Heels, Soles and Mechanical Rubber Goods.
Designers of Special Machinery
Arthur Jackson Wills Co.,
North Brookfield Mass.

USED MACHINERY
Mills, Calenders, Grinders, Washers
New and Old Rubber Scrap
Rubber Cloth Remnants
M. Norton & Co.
Locust St. Medford, Mass.

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manufactured from *Genuine English Chalk* and *Cliffstone*—no adulterations.
Southwark Mfg. Co.
Camden New Jersey

ZINC OXIDES—A Z O, the Super Zinc.
American Zinc Sales Co.
P. O. Box 1428 Columbus, O.
Pierce Bldg. St. Louis
Prudence Bldg. New York

ZINC OXIDES — Including KADOX and "Albalith."
The New Jersey Zinc Sales Company
New York Pittsburgh Chicago
Cleveland San Francisco

Reclaimed Rubber

NEW YORK, Oct. 1, 1925

Reclaimers report continued high demand for all grades. The slackened production of tire plants has not affected as yet the amount of reclaimed rubber being used with the result that reclaiming plants are still working at capacity. The firmness of scrap and crude rubber has served to maintain reclaim at fair levels and only a few slight revisions upwards are noted since our last report. Prices follow:

Friction (Uncured)				
No. 1	lb.	.60	@	.65
No. 2	lb.	.40	@	.45
High Tensile Black				
Super-Reclaim No. 1	lb.	.28	@	.28
" " No. 2	lb.	.16½	@	.17½
Shoe				
Unwashed	lb.	.10½	@	.11
Washed	lb.	.13½	@	.14
Tube				
No. 1 (Floating)	lb.	.26½	@	.27½
No. 2 (Compounded)	lb.	.19	@	.19½
Tires				
Black unwashed	lb.	.10½	@	.11
Black, washed	lb.	.12	@	.13
Black, selected tires	lb.	.13	@	.13½
Dark Gray	lb.	.14¾	@	.15¾
Light Gray	lb.	.15½	@	.16
White	lb.	.19	@	.19½
Truck	lb.	.11	@	.11½
Miscellaneous				
Mechanical Blends	lb.	.08	@	.09
Red, High Grade	lb.	.18	@	.18½

Scrap Rubber

NEW YORK, Oct. 1, 1925

Demand for scrap rubber has been slow during the past two weeks. The easy tendency of prices was continued to the extent of some light additional markdowns. Reclaiming plants, although running near capacity, are reported to have fairly large stocks of scrap. Dealers are purchasing scrap steadily at previous figures in expectation that the demand from reclaimers will soon show material improvement.

Auto tire peelings		.01½	@	—
Standard White auto	ton	35.00	@	—
Mixed auto	ton	23.00	@	23.50
Bicycle tires	ton	10.00	@	11.00
Clean solid truck tires	ton	33.00	@	36.00
Boots and shoes		.02	@	.02¼
Arctics, untrimmed		.01	@	.01½
Arctics, trimmed		.01⅝	@	.01⅞
Inner tubes, No. 1		.08½	@	.09
Inner tubes, compounded		.07	@	.07¼
Inner tubes, red		.05½	@	.05⅝
Air Brake Hose	ton	16.00	@	18.00
Rubber hose	ton	15.00	@	16.00

Crude Rubber

NEW YORK, Oct. 1, 1925

During the past fortnight actual offerings of nearby rubber were small, with a shortage existing on the September position. Buyers have shown some interest but their bids for the most part have been too low to attract sellers. The majority of holders of nearby rubber were confident in the return of buying and were reluctant to make actual offerings, except on firm bids. Spot rubber continued to be scarce and it was difficult to secure any sizable quantities. Shipment rubber was offered in fair weights.

Some consumers were able to buy at really low prices, according to operators, further cheap offerings were obtainable as sellers showed a tendency to do business on certain days when the London market was easy and were endeavoring to secure supports from both dealers and consumers. The demand for nearby rubber on the part of dealers and consumers had the effect of strengthening the market when it would have otherwise been weak. There was also a better demand for far forwards, with January, March and the years 1926 and 1927 mentioned. Latex fell off in demand to some extent, with a premium asked ranging from a half-cent to a cent above Standard Sheet. Off grades were subject to better inquiry; buyer showed interest in Blankets and in Clean Browns.

With several steamers not expected to arrive, the total tonnage for September, it is believed will be in the neighborhood of 25,000 tons, which will be considerably below the requirements of consumers. Some factors were inclined to the purchase of October and Nov./Dec., feeling that as these positions come nearer to spot, little could be lost even if quotations declined, while should prices remain firm there is everything to gain.

Following the period of inactivity the market firmed considerably two days ago. Active bidding advanced prices there. On the New York market, although no great business was done, prices were firmer in sympathy with London and the spot position moved up about 1½ cents in sellers' hands. October was also in better inquiry and buyers bid as high as 87½ cents. Paras held steady with a tendency to advance on bids. Brown crepes and ambers were also firmer. No sign of a break in values is apparent and there are few sellers who show any tendency of weakening their hold on the market.

NEW YORK MARKET

Plantations—			
Ribbed Smoked Sheets			
Spot	.92½	@	.93
October	.88½	@	.89½
Nov./Dec.	.80	@	.81
Jan./March	.75	@	.76
First Latex, crepe spot	.92	@	.93
Amber Crepe, No. 2, spot	.82	@	—
" " No. 3,	.80	@	—
" " No. 4,	.78	@	—
Brown Crepe, Rolled	.57	@	—
" " Clean, thin	.82	@	—
" " Specky	.80	@	—
Pontianac—			
Bangermassin	Nominal		
Palembang	Nominal		
Prime Pressed	Nominal		
Sarawak	Nominal		
Paras—			
Up-river Fine	.72	@	—
" Medium	.68	@	—
" Coarse	.51	@	—
Islands, Fine	.60	@	—
Acre Bolivian, fine	.72½	@	—
Tapajos, fine	Nominal		
Cut Beni Bolivian, fine	Nominal		
Caucho Ball—			
Upper, shipment	.50½	@	—
Centrals—			
Corinto, scrap	.52	@	—
Esmeraldo, sausage	.45	@	—
Grayule, w and d	.48	@	.49
Africans—			
Benguela, No. 2	Nominal		
Congo, upper, black	Nominal		
" " red	Nominal		
Kassai, Prime Red	Nominal		
Balata—			
Block, Columbia	.56	@	—
" Cuidad	.64	@	—
Surinam, sheet	.64	@	—
Gutta Percha—			
Siak	.23	@	—
Red Macassar	2.80	@	3.00
Chicle—			
Mexican, Yucatan	.68	@	—

LONDON MARKET

Standard Ribbed Smoked Sheets—	
Spot	42¾d
October	41¾
Oct.-December	40
Jan.-March	35¾

SINGAPORE MARKET

Standard Ribbed Smoked Sheets—	
Spot	37⅜d
Nov./Dec.	35¾
Jan.-March	32¾
April/June	29⅝

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OF EVERY DESCRIPTION

TAYLOR, ARMITAGE & EAGLES Inc.

Equitable Building, 120 Broadway, New York

SEA ISLANDS EGYPTIANS PEELERS

FABRICS TO SPECIFICATION

AMERICAN COTTON FABRIC CORPORATION

ALL THE LEADERS

Are represented in this section. Purchasing agents can rely on the concerns listed as thoroughly reliable in every way.

The Market Place

CRUDE RUBBER — All Grades. Washed - Dried - Milled.
Send us Your Inquiries.
Gibraltar Rubber Corp.
West New York, N. J.

FABRICS—Tire fabrics of every description, Sea Island, Egyptians, Peelers.
Taylor, Armitage & Eagles, Inc.
120 Broadway New York

LINERS — PROCESSED
For
Various Rubber Stocks
The Cleveland Liner & Mfg. Co.
5508 Maurice Ave., Cleveland, O.

DIPHENYLGUANIDINE
Aero Brand, product of the highest purity from dependable source of supply.
American Cyanamid Co.
511 Fifth Ave. New York City.

FABRICS—Stockinets, Jersey Cloth and Special Fabrics for the Rubber Industry.
U. S. Knitting Co., Inc,
Pawtucket, R. I.

MANDRELS--CIRCULAR
and Economy Calender Shells
Prompt Service—Let us quote you.
The Clyde E. Lowe Co.
2976 E. 81st St., Cleveland, Ohio

DRY KILN—for drying crude rubber and chemicals—Hunter Process.
Carrier Engineering Corporation
750 Frelinghuysen Ave. Newark, N. J.

FACTICE—Prevents blooming, makes colors fast and a smoother batch.
Stamford Rubber Supply Co.
Stamford, Conn.

MOLDS AND CORES—
Tire building equipment; general machine work.
The Akron Equipment Co.
Akron, Ohio

FABRICS—Tire fabrics, Egyptian—Peeler, Karded and Combed, Cord and Square.
Cabarrus Cotton Mills
(Cannon Mills, Inc.)
55 Worth St. New York
327 S. La Salle St. Chicago

GUAYULE—"Duro" Brand washed and dried ready for compounding.
Continental Rubber Co.
120 Broadway New York

MOLDS & CORES—Tire building machines; tire finishing stands; tubing machines; hydraulic presses.
The Akron Standard Mold Co.
Akron, Ohio

FABRICS—Spots and Contracts: Tire Fabrics, Enameling ducks, Tube Wrapping Tapes.
H. Frank Jones
395 Broadway New York City

HARD RUBBER, quality hard rubber goods of every description.
Vulcanized Rubber Co.
251 Fourth Ave. New York City

MOLDS & CORES—for automobile tires; general machine work.
Kuhlke Machine Co.
Akron, Ohio

FABRICS—Tire fabrics—coarse builders, chafers, breakers in all grades.
New England Southern Mills
LAWRENCE & CO.
24 Thomas St. New York
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HEEL BURRS—with central holes; flat and cupped.
J. H. Sessions & Son
279 Riverside Ave. Bristol, Conn.

RECLAIMED RUBBER—
Uniformity, reliability, cleanliness.
Pequanoc Rubber Co.
Butler, N. J.

FABRICS—Tire, cords, enameling ducks, drills, sheetings, osnaburgs.
J. H. Lane & Co.
250 West 57th St. New York City

RUBBER FACTORIES
use vast quantities of raw materials and equipment. Let the industry know how well you can serve it through a listing in this section.

RECLAIMED RUBBER—
for all purposes.
Rubber Regenerating Co.
Naugatuck, Conn.

THE MARKET PLACE Section Continued on Second Page Following.

CHEMICALS & COMPOUNDING INGREDIENTS

Accelerators — Colors — M.R. — Compounding Ingredients
Softeners — Vulcanizing Ingredients — Rubber Substitutes

NEW YORK, October 1, 1925—Despite reports from tire manufacturing centers that production has dropped off from 10 to 30 per cent with but few exceptions, demand for standard compounding materials has continued in good force right up to the end of September. This excellent condition has surprised many chemical dealers and manufacturers and of course they hope for its continuance. On a whole, however, the rubber industry has slackened down appreciably as was to be expected at this season of the year. As a rule, production schedules are lessened during the summer months but 1925 has been an exception in that peak production has held up to the fall months. Prices have shown little change with stock of most lines ample for present needs.

ACCELERATORS

Organic			
Aldehyde ammonia, crystals	lb.	$ .90	@ .98
Aniline oil, drums	lb.	.17	@ .17½
Di-Ortho-Tolylguanidine	lb.	1.10	@ 1.13
Diphenylguanidine	lb.	.95	@ .98
Ethylidene aniline	lb.	.60	@ .65
Excellerex	lb.	.28	@ .34
Formaldehyde-Aniline	lb.	.40	@ .42½
Hexamethylene-tetramine	lb.	.80	@ .82½
Paraphenylenediamine	lb.	1.25	@ 1.30
Piperidine-Piperidyldithio-Carbamate	lb.	4.80	@ 5.00
Super-Sulphur No. 1	lb.	.50	@ .55
Super-Sulphur No. 2	lb.	.18	@ .30
Tensilac, No. 41	lb.	.65	@ —
Tuads	lb.	4.50	@ 5.00
Thiocarbanilide, kegs	lb.	.25	@ .32
Triphenylguanidine	lb.	.70	@ .75
Vulcone	lb.	.75	@ .79
Zimate	lb.	5.00	@ —
Inorganic			
Lead, sublimed blue	lb.	.10	@ —
Lead, white	lb.	.10¾	@ —
Litharge, domestic	lb.	.11½	@ —
Lime, superfine	lb.	.01½	@ .02
Magnesia, calcined,			
light	lb.	.24	@ .25
extra light	lb.	.40	@ .45
heavy	lb.	.04	@ .06½

COLORS

Blacks			
Arrow "Aerfloted"	lb.	.07½	@ .12
Bone Black	lb.	.05½	@ .11
Carbon "	lb.	.08	@ .12
Drop "	lb.	.07½	@ .14
Ivory "	lb.	.12	@ .45
Lamp "	lb.	.12	@ .40
Micronex	lb.	.09	@ .13
Thermatomic carbon	lb.	.04	@ .08
Blues			
Cobalt	lb.	.21	@ .26
Prussian	lb.	.34	@ .35
Ultramarine	lb.	.08	@ .35
Browns			
Iron oxide	lb.	.02¼	@ .06¼
Sienna, Italian	lb.	.04	@ .14
Umber, Turkey	lb.	.04	@ .06
Vandyke, domestic	lb.	.03	@ .03½
Greens			
Chrome, light	lb.	.28	@ .30
medium	lb.	.30	@ .32
dark	lb.	.31	@ .34
commercial	lb.	.09	@ .10
Chromium Oxide, bbl.	lb.	.37	@ .38
Reds			
Antimony			
crimson, 15/17 F.S.	lb.	.43	@ .45
sulphur free	lb.	.46	@ .49
golden, 15/17 F.S.	lb.	.17	@ —
pentasulphide,			
pure,	lb.	.35	@ .38
15/17 F.S.	lb.	.33	@ .36
red sulph. 15-17F.S.	lb.	.16	@ .20
Indian English	lb.	.11	@ .15
Oximony	lb.	.13½	@ —
Para toner	lb.	.90	@ 1.00
commercial	lb.	.13½	@ .14½
Red oxide, reduced	lb.	.04	@ .12
pure	lb.	.12	@ .14
Toluidine toner	lb.	1.85	@ 2.10
Venetian red	lb.	.01½	@ .05
Vermillion, quicksilver,			
English	lb.	1.35	@ 1.40
domestic	lb.	.15	@ .25
Whites			
Albalith	lb.	.05⅞	@ .06⅛
Aluminum bronze		—	@ —
Lithopone, Akcolith	lb.	.06	@ .06½
Lithopone, Azolith	lb.	.05⅝	@ .06⅛
Zinc Oxide—American Process			
XX red	lb.	.07½	@ .07¾
Kadox,			
black label, kegs	lb.	.10⅝	@ .11¼
blue " "		.09⅝	@ .10⅛
red " " "		.08⅝	@ .09⅛
American Azo:			
ZZZ (lead free)	lb.	.07¼	@ .07¾
ZZ (under 5% leaded)	lb.	.07	@ .07½
Z (8-10% leaded)	lb.	.06¾	@ .07¼
Zinc Oxide—French Process			
White seal	lb.	.11⅞	@ —
Green seal	lb.	.10⅝	@ —
Red seal	lb.	.09¾	@ .10
Yellows			
Chrome, light		.17½	@ .18½
dark and medium	lb.	.17½	@ .18½
Cadmium Sulphide	lb.	1.20	@ 1.50
Ocher, French medium	lb.	.02⅝	@ .02¾
domestic	lb.	.01½	@ .02½

COMPOUNDING INGREDIENTS

Aluminum Flake			
(f.o.b. plant)	ton	21.85	@24.50
hydrate light	lb.	.16½	@ .17½
Ammonia carbonate	lb.	.12	@ .13½
Asbestine	ton	13.00	@18.00
Barium carbonate	ton	54.00	@56.00
Barium Dust	lb.	.05	@ .06
Barytes southern off-color,	ton	12.00	@18.00
Western prime white	ton	22.00	@23.00
imported	ton	27.00	@35.00
Basofor	lb.	.04½	@ —
Blanc fixe, dry f.o.b. works	lb.	.04	@ .04¼
Carrara filler	lb.	.01¾	@ .02
Chalk, precip., extra light	lb.	.04¼	@ .05
heavy	lb.	.03¼	@ .04
Clay, China, domestic	ton	15.00	@25.00
Catalpo (fact.)	ton	35.00	@38.00
Dixie	ton	20.00	@35.00
Blue Ridge, Dark	ton	9.00	@ —
" " Light	ton	12.00	@ —
Langford	ton	12.00	@22.00
Glues, extra white	lb.	.21	@ .29
medium white	lb.	.18	@ .24
common bone	lb.	.11	@ .14
Graphite flake, bbls.	lb.	.06½	@ .12
Infusorial earth, powdered	ton	23.00	@25.00
bolted	ton	15.00	@20.00
Liquid latex	gal.	3.00	@ —
Magnesia, carbonate	lb.	.06½	@ .07
Mica, powdered	ton	65.00	@80.00
Rotten Stone (powdered)	lb.	.02½	@ .04½
Soapstone, powdered	ton	15.00	@22.00
Starch, powdered	cwt.	3.81	@ —
Talc, domestic	ton	16.00	@18.00
Terra Alba	cwt.	1.25	@ 2.00
Tripoli, white	lb.	.02	@ .02¼
Whiting, commercial	cwt.	1.00	@ 1.15
gilder's bolted	cwt.	1.25	@ 1.35
English cliffstone	cwt.	1.50	@ —
Paris white American	cwt.	1.25	@ 1.50
Quaker	ton	13.00	@15.00
Sussex	ton	8.00	@10.00
Wood pulp XXX	ton	35.00	@ —
" " X	ton	25.00	@ —

MINERAL RUBBER

Genasco (factory)	ton	50.00	@52.00
Granulated M.R.	ton	36.00	@45.00
Hydrocarbon, Hard	ton	29.00	@35.00
Hydrocarbon, Soft	ton	29.00	@35.00
320/340 M.P. hydrocarbon (c. l. factory)	ton	47.00	@52.00
300/310 M.P. hydrocarbon (c. l. factory)	ton	42.00	@47.00
Paradura	ton	70.00	@75.00
Robertson, MR, solid	ton	25.00	@37.00
M.R. (gran)	ton	42.00	@80.00

SOFTENERS

Acids			
Acetic, 28%	cwt.	3.00	@ 3.25
Creasylic, 97%	gal.	.57	@ .64
95%		.55	@ .60
Muriatic, 20%	cwt.	.90	@ 1.00
Nitric, 36 degrees	cwt.	4.50	@ 4.75
Sulphuric, 60 degrees	ton	10.00	@11.00
66 degrees	ton	14.00	@15.00
Tartaric, crystals	lb.	.29	@ —
Alkalies			
Caustic soda, 76%	cwt.	3.10	@ —
Soda ash, 58% C.L.	cwt.	1.43	@ 1.45½
Oils			
Castor, No. 3, bbls.	lb.	.15½	@ —
Corn, crude, bbls.	lb.	.12½	@ —
refined	lb.	.14	@ —
Cottonseed, crude		.09	@ .09⅛
Glycerine C.P. drums	lb.	.19	@ .19½
Linseed, Raw C.L. bbl.	gal.	1.00	@ —
Palm, Niger	lb.	.09½	@ .09¼
Lagos	lb.	.09⅜	@ .09½
Peanut, domestic, crude	lb.	.13	@ —
Petrolatum, white		.10½	@ .10¾
amber		.03½	@ .03⅝
dark amber	lb.	.03¼	@ .03⅜
Pine, steam distilled	lb.	.65	@ .66
Rapeseed, refined	gal.	1.02	@ 1.03
blown	gal.	1.18	@ —
Rosin, first rectified	gal.	.70	@ .71
second rectified	gal.	.73	@ .74
Soya Bean, crude		.13¼	@ .13½
Tar, commercial	gal.	.30	@ .32
Resins and Pitches			
Parra M.R.	lb.	.06	@ .07
Tar Retort	bbl.	15.00	@15.50
kiln burned	bbl.	15.00	@15.50
Pitch, Burgundy	lb.	.06	@ .06½
coal tar	gal.	.05½	@ .06
pine	bbl.	6.50	@ 7.00
Rosin, grade K	bbl.	15.40	@ —
Solvents			
Alcohol denatured,			
No. 1 bbls.	gal.	.60½	@ .64½
Benzol, 90%	gal.	.28	@ .30
pure		.32	@ —
Carbon bisulphide	lb.	.06	@ .07
tetrachloride	lb.	.06¾	@ .07
Dimethylaniline	lb.	.32	@ .34
Motor gasoline,			
steel bbls.	gal.	.17	@ —
Naptha, V. M. & P.	gal.	.16¾	@ —
Toluene	gal.	.26	@ —
Turpentine, spirits	gal.	1.15	@ 1.16
wood	gal.	.95	@ .96
Waxes			
Beeswax	lb.	.55	@ .65
Carnauba, No. 1	lb.	.37	@ .38
Ceresin, white	lb.	.10	@ .11
Montan, crude	lb.	.06	@ .06½
Ozokerite, black	lb.	.24	@ .25
green	lb.	.26	@ .30
Paraffine White, A.M.P.	lb.	.05½	@ .05⅝
Yellow A.M.P.	lb.	.05⅜	@ .05½
Sweet wax	lb.	.12	@ —

SUBSTITUTES

Black	lb.	.08½	@ .15
White	lb.	.10½	@ .17½
Brown	lb.	.10	@ .16
Brown factice	lb.	.10	@ .16
White factice	lb.	.10½	@ .17½

VULCANIZING INGREDIENTS

Black hyposulphite	lb.	.18	@ .20
Ethyl Chloride, Cyl.	lb.	.55	@ —
" " Drums	lb.	.45	@ —
Sulphur Chloride (drums)	lb.	.04½	@ .05
Sulphur flour			
Commercial bags	cwt.	1.35	@ 1.70
" bbls.	cwt.	1.70	@ —
Superfine, bags	cwt.	2.00	@ 2.40
" bbls.	cwt.	2.40	@ 2.70
100% pure, refined,			
bags	cwt.	2.30	@ 3.00
bbls.	cwt.	2.50	@ 3.40